mental health digest

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Seymour D. Vestermark, M.D.

John Romano, M.D.

## cover story

**The first annual Seymour Vestermark Memorial Lecture will be delivered on September 29, 1969, in Washington, D.C., by John Romano, M.D., Distinguished University Professor of Psychiatry and Chairman, Department of Psychiatry, University of Rochester School of Medicine and Dentistry, and Psychiatrist-in-Chief, Strong Memorial Hospital, Rochester, New York.**

**The new lectureship is sponsored jointly by the American Psychiatric Association and the National Institute of Mental Health in honor of the late Seymour D. Vestermark, M.D., who was Chief of the NIMH Training Branch from 1948 to 1958 and an international authority in the field of professional mental health training.**

**The first lecture will be given at 8 p.m. in Hitchcock Hall Auditorium at NIMH's National Center for Mental Health Services, Training, and**

***(Continued on Inside Back Cover)***


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**The *Mental Health Digest* is a monthly publication of the National Institute of Mental Health. Designed to reflect the whole spectrum of mental health and to present a broad sampling of scientific subject matter and professional points of view, the *Digest* contains condensations of selected current journal articles, reviews, Federal and State program documents, and other pertinent material.**

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# The New Eclecticism

GENE M. ABROMS

To the younger generation of psychiatrists the orthodoxy-eclecticism controversy is not the vital issue it once was. Controversies of the orthodox-eclectic type are characteristic of the pretechnology phase of a clinical science. The history of general medicine, prior to the discovery of the effective therapies, e.g., antibiotics, vitamins, hormones, affords many examples of controversies between ideologues and their more loosely conceptualized colleagues. Such controversies continue so long as most disorders in a clinical field can neither be effectively treated nor specifically explained. There are now no warring schools of internal medicine because one or the other of these conditions is met with respect to most medical disorders.

I suggest that the same conditions are on the way to being met in psychiatry with the result that the old orthodox-eclectic controversy is giving way to a struggle for a more meaningful eclecticism. This eclecticism has as its goal the training of psychotherapists with a large repertoire of techniques capable of modifying diverse pathological behaviors. It strives for a broad enough theoretical conception to explain the usefulness and specific applications of these various approaches and to guide future research. Perhaps we have come to the end of the age of ideology.

### Effective Treatments

*Pharmacotherapy*—The psychoactive drugs have revolutionized psychiatric treatment. Of the claims for these agents, the most important are: The phenothiazines improve the target symptoms of the acute and chronic schizophrenic psychoses; the antidepressants promote at least moderate improvement in the majority of the severe depressions.

*Electric shock therapy (EST)*—EST remains the treatment of choice for the most severe psychotic depressions, particularly in the midlife and involutional age groups and in the high suicide-risk patient.

*Behavior therapies*—The behavior therapies include aversive stimulation, negative practice, operant conditioning, reinforcement withdrawal, and desensitization. Common to these techniques is a uniform procedure which culminates in a programmed, stepwise retraining experience. Behavior therapists have taken steps toward fulfilling the conditions of a scientifically evaluable form of psychotherapy. Their emphasis on the behavioral criteria of improvement holds out the promise of doing more rigorous outcome studies. Furthermore, the procedures of the behavior therapies raise hopes of widening the base of therapeutic personnel.

*Hypnosis and suggestion techniques*—Here we cross the border from relatively well-charted therapeutic terrain to uncharted regions where the way is known only by gifted practitioners. The problem is illustrated by hypnosis. In capable hands, hypnotherapy is helpful to patients with a range of symptoms. But there are no controlled studies that define the patient group

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and show the degree, duration, and type of symptom change obtained. What happens after the trance is achieved is rarely defined precisely enough to determine whether a therapist's failure to reproduce a colleague's results is due to faulty technique or a lack of artistic talent.

Since these same criticisms can be made of the remaining approaches we shall discuss, they will not be repeated, but an attempt will be made to specify the kinds of modest claims that could be established about these techniques in the future.

As far as hypnosis and other suggestion procedures are concerned, they are best thought of only as change-inducers. The value of these techniques will likely be as adjuncts to other more complete procedures which seek to promote generalization, maintenance, and modulation.

*Individual psychotherapy*—Once again, we "know" that it works with many patients, and that in the hands of some therapists, virtually all patients appear to get better. Critics of psychotherapy are correct in stressing the lack of criteria for patient selection, the lack of defined procedures, and the failure to specify the precise behaviors that are being modified.

I suspect that the task will remain insuperable unless more modest claims are made for individual therapy. One proposition is that traditional individual psychotherapy is not a worked-out technique of behavioral change but rather provides the human context for the application of such techniques. It may be that all good individual therapists, without necessarily being aware of it, use suggestion and behavior therapy techniques in their therapeutic relationships.

An evaluation of traditional individual therapy would have the more circumscribed goal of determining, by systematic manipulation, the human-relationship variables which facilitate the learning process.

Another claim is that psychotherapy, in the form of a psychoanalytic technique, is an effective treatment for those who function fairly well in a technical or instrumental sense, who have few definite symptoms, but who feel impoverished in their emotional responsiveness. The purpose of such treatment would be for the patient to develop a meaningful philosophy of living based on identifying with an affectively charged therapist. How this is best accomplished and precisely with whom would constitute legitimate research questions.

*Group techniques*—The advantage of group techniques is that they provide a complex enough social setting to evoke and allow the working out of conflicts which might remain inaccessible in the one-to-one situation. Again, the question would be to determine what kinds of patients with what behaviors should work in what type of group process.

The following claims should be susceptible of proof with these group techniques: Psychodrama and role-playing should be regarded as an adjunctive technique, not a full-fledged therapy. Couple or family therapy is best thought of as a treatment context, not a specific technique or set of techniques. It is recommended when the patient's disturbed behavior can be thought of as responsive to, or expressive of, a larger disturbance in his marital or family relationships. This would apply to de-

pendent minors, to most adults who live with or are financially dependent on parents or siblings, and to spouses with significant marital difficulties who have a commitment to the continuance of their marriage.

Sensitivity or T-group training is a group learning context appropriate to nonnaturalistic collections of individuals who share a common therapeutic goal. It includes a reasonably well-formulated technique involving a systematic concentration on here-and-now communication behavior. To this end, analysis of communicative disorder is often followed by the patient's receiving positive or negative reinforcement from the group. Improvement in communicative skills is often effective in furthering the realization of life or work goals. Defining this kind of improvement, specifying the procedure, and setting criteria for patient selection would again be legitimate areas of research.

*Milieu therapy*—"Milieu therapy" is not a specific therapeutic procedure but represents the largest context for purveying specific therapeutic techniques. The context is more extensive than the dyadic, family, or nonnaturalistic small group relationship. It is that of an entire community. Milieu therapy also refers to the organizational machinery for providing all the therapeutic modalities discussed heretofore in a synergistic, consistent manner. Thus milieu therapy is the fullest embodiment of the eclecticism of techniques.

The evaluation of milieu treatment cannot be separated from an assessment of symptom improvement and new learning as fostered by its constituent techniques. The milieu must be evaluated as a social system in terms of its organizational soundness to provide these treatment modalities. The populations appropriate to milieu therapy are those who require a multiple impact approach: the severe affective disturbances, the socially deviant, and those most deficient in social skills.

All these approaches are, in my opinion, effective treatment modalities. Drug therapy, EST, and some of the behavioral approaches have made rather concrete claims, which are susceptible to checking. The others need to refine and circumscribe their claims to permit more straightforward evaluation.

One refinement is to make a distinction between therapeutic techniques and therapeutic contexts. Drugs, EST, behavior therapies, psychoanalytic therapy, hypnosis, suggestion, sensitivity communications analysis, psychodrama, and role-playing are all techniques for either limited or generalized change of specific behaviors. But the individual, group, and milieu therapies, as usually practiced, do not represent specific techniques but only the relationship contexts for applying these techniques. To ask whether or not family therapy (or individual therapy) works is to pose an unanswerable question; contexts do not "work," they simply "are," for better or worse. To answer what works, one must specify the target symptoms, the techniques (psychoanalysis, behavior therapy, communication analysis, role-playing) directed at them, and the effects of the latter on the former.

The danger of eclecticism is that it may disintegrate into a "shot-gun" application of too many techniques for

poorly rationalized and inconsistent purposes. To avoid this danger, the need for a theoretical focus becomes obvious. How can one reconcile all the approaches to influencing human behavior that have been discussed? Here only a rough outline will be attempted.

**A Theoretical Explanation**

The first assumption is that the results of therapy must be specifiable in terms of changes in observable human behavior, not in subjective feelings or attitudes alone. Global aims such as "self-realization" or "living productively and creatively" must be translatable into units of observable behavior. Some specific behavioral goals of treatment are to control or limit destructive, disorganized, deviant, dysphoric, and dependent behavior, and to learn adaptive social skills such as orienting oneself in a situation; asserting one's feelings and attitudes directly without becoming symptomatic and without discomfiting others; planning, cooperating in, and carrying through occupational and recreational objectives.

The determinants of behavior must be understood hierarchically, not disjunctively; i.e., one does not decide that schizophrenia is due to faulty family relations *or* faulty biochemical processes. Rather these two factors occupy different levels, one being a more molecular, the other a more molar explanation, but neither is able to stand without reference to the other. At its most molecular, behavior is determined by biochemical and genetic factors; at its most molar, by the individual's interaction with an environment viewed, say, as a planetary or galactic organization. In between are the individual's relationship to his neurophysiology, ethology, psychological organization, naturalistic environment, family environment, peer groups, community, region or ethnic group, nation, etc. Each level represents a more general, comprehensive mode of organizing and explaining the phenomena. But each mode depends on both its lower and higher neighbors to give it full meaning.

Pharmacotherapy and EST represent therapeutic interventions at the biochemical and physiological levels. Individual therapy, behavior therapy, hypnosis, and suggestion intervene at the psychological organization, family environment, and small group levels. Family therapy, psychodrama, sensitivity group, and milieu therapy all represent interventions at levels of environmental organization. As the world becomes progressivley more intimate, we shall doubtlessly discover that even molecules are sometimes excessively coarse to determine the finer deeds of man, and that looking at his behavior as a reflection of his family relationships is too narrow a perspective when the heavenly bodies are in an uproar.

# Plasma Uric Acid Concentrations Among Edinburgh Business Executives

AMECHI ANUMONYE, JANETTE W. DOBSON, SHEILA OPPENHEIM, and JAMES S. SUTHERLAND

Gout has affected many outstanding men whose names and achievements are permanently recorded in history. Among those who suffered from this disorder were Alexander the Great, Darwin, Harvey, Kubla Khan, Luther, Marlborough, Newton, both the Pitts, Sydenham, and Wolsey. Havelock Ellis suggested that "this association cannot be a fortuitous coincidence."

Several surveys within different population groups strengthen the case for an association of serum uric acid with higher social classes or with achieved social status. This study was organized by the Edinburgh University Department of Psychiatry and the Medical Research Council Brain Metabolism Unit in collaboration with the Edinburgh Junior Chamber of Commerce.

The sample of 100 executive level business and professional men was classified into "top management," "middle management," and "junior management."

Different levels of management were defined by three levels of responsibility.

Top Management: overall responsibility—policy, administrative, financial.
Middle Management: autonomy within a clearly circumscribed area; answerable only to top management.
Junior Management: limited responsibility only—not infrequently at trainee level—under supervision for matters other than detail.

Condensed with permission from the *Journal of the American Medical Association*, 208(7):1141-1144, 1969.

A group of 40 staff members and patients from the Royal Edinburgh Hospital were used as a control group, their freedom from both affective disorders and any physical illness involving elevated levels of uric acid having been previously ascertained.

Interviews were carried out by a psychiatric social worker having a special knowledge of the attitudes, standards, mores, and anxieties of the world of commerce. The aim was to assess seven personality variables (achievement orientation): drive, achievement, leadership, driving of self, range of activities, attitudes to pressure, status striving.

Two instruments, the Gordon Personal Profile and the Gordon Personal Inventory, were used to obtain a more precise personality coverage.

The plasma uric acid level was estimated by a modification of uricase spectrophotometric technique from venous blood obtained from the subjects. The opportunity was taken to investigate the presence of the following variables in the blood: packed-cell volume and hemoglobin, glucose, sodium, potassium, 5–hydroxytryptamine, tryptophan, and tyrosine levels.

A dietary survey of the executives was undertaken to assess the relationship between dietary factors and plasma uric acid. Data on height and weight were taken during the interview to establish the ponderal index of the subject.

*Biochemical findings*—The business executives had a mean plasma uric acid level of 6.0±SD 0.88 mg/100 ml (range, 3.5 to 8.3 mg/100 ml). This is

higher than that of the 40 male control subjects who had a mean plasma uric acid level of 4.5 ±SD 0.8 mg/100 ml (range, 2 to 7 mg/100 ml). The difference is significant.

Our classification indicates that top executives have a plasma uric acid level of 6.23 ± SD 0.89 mg/100 ml as against the group mean of 6.0 ± SD 0.88 mg/100 ml and the plasma uric acid level of 5.75 ± SD 0.81 mg/100 ml in the combined middle and junior groups. The difference between the top group and the combined group is statistically significant.

Plasma uric acid values did not show significant correlation with other biochemical variables, which include blood glucose and hemoglobin levels. No correlation appeared between plasma uric acid level and either age or ponderal index. A positive correlation was found between serum sodium and serum potassium levels.

*Achievement orientation scales*—Only two personality variables were found to have a positive correlation with plasma uric acid levels. They were drive and range of activities.

*Gordon Personal Profile and Personal Inventory*—The only significant finding here was a negative correlation between the plasma uric acid value and responsibility.

*Dietary results*—The group had a higher mean protein and alcohol intake compared with a similar population group of bank employees. The total achievement orientation score showed a positive correlation with purine nitrogen intake. On the Gordon scale, only ascendancy was positively correlated with this item of dietary intake. No positive correlation was shown between dietary intake and plasma uric acid.

It is interesting to note that previous workers have observed that a similar group of business executives had a high incidence of the diseases associated with "stress," such as coronary artery disease, diabetes, and hypertension, each of which has itself been mentioned as being associated with elevated levels of plasma uric acid.

A study of this nature involves consideration of two types of data. On the one hand, there is the precise and relatively straightforward measurement of blood variables, and the less accurate but nevertheless quantitative estimation of dietary intake, and on the other hand the complex and much less precisely measurable evaluation of personality traits and career status.

# The Mental Health of the Older Executive

MERRILL T. EATON, JR.

As the executive reaches late middle age, things may occur which create new stresses and may have an adverse effect on his well-being, effectiveness, and mental health. The person in a managerial position usually has good ego strength and better than average mental health. There are, however, new stresses and problems that arise for managers in this age group. If these produce psychiatric symptoms, they become clinically important. To the employer and industrial physician, the importance lies in the role of the manager as a decision maker and the fact that even minor psychiatric symptoms may affect the quality of decisions.

Among the things which create problems for the middle-aged and older executive are:

*Recognition that advancement is unlikely*—Most managers are energetic, optimistic, ambitious, competitive people who expect continued advancement. For some, such hopes are realistic until retirement or beyond. For others, there comes a time when advancement is too improbable to support a reasonable hope. When a man sees that his career is blocked, he may: be able to accept the situation comfortably and continue to work effectively, undertake a new career, sublimate the drive for attainment by getting involved in outside activities, use the mechanism of denial to repress the awareness of reality, divert energy to the objective of "hanging on," or develop symptoms. The most common symptom among executives who feel that advancement is impossible is mild depression.

More apparent may be boredom, apathy, or lack of energy. There are vague somatic complaints. Inefficiency and poor morale may be noted. Increased alcohol consumption and overeating are sometimes a result.

When loss of hope is abrupt, one encounters a crisis situation. Anxiety or one of its manifestations is likely to be the complaint, although depression, somatic symptoms, or behavior changes may be noted. Failure to deal with the crisis may lead to: development of more serious psychiatric disorders, impulsive behavior that may impair future career development, or progressive difficulties in handling future crises.

*Actual attainment of a career goal*—When a person receives a long awaited promotion to a top position or when a project that has been years in planning becomes a reality, one would expect the executive to be happy. Why do people develop depressions, other psychoneurotic symptoms, or psychophysiologic disorders just when success is achieved? In a few cases we find it as a recurring phenomenon, suggestive of a life in which a person may repeatedly be on the point of success and not attain it because of illness or maladaptive behavior. The causative factor may be intrapsychic conflict, and the illness is a reactivation of the Oedipus complex with fear of competing with the father being displaced to father figures.

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Condensed with permission from *Geriatrics*, 24(5):126-134, 1969.

Another factor is need to make a new adjustment. This is always a stress and although the older executive has made successful readjustments to new situations, the amount of adjustment required, together with increasing age and less resilience, can overwhelm coping mechanisms.

The most important factor is unrealistic expectation of what success will mean. It may be realistic for a man to expect that a promotion will enable him to buy a new home and that this will add to his wife's happiness, that a transfer will please his children, or that increased status will help him get into an exclusive club, but it is less likely that a husband's advancment will make a complaining, frigid woman into a happy, affectionate one, or a rebellious adolescent respectful and conforming.

*Increasing isolation and narrowing of interests*—At best, the executive is somewhat isolated. Being cast in a quasi-paternal role by his employees, he is excluded from many informal activities.

The younger executive has friends in the organization who knew him before he assumed major responsibilities. As he grows older, transfers and retirements narrow his circle of old friends. Along with this, outside activities are reduced.

More important than loss of effectiveness is the loss of satisfaction. The person seems to age rapidly and actually may. Also, since all his satisfactions are work related, he becomes vulnerable to frustrations in that area.

*Approaching retirement*—The most common problems stem from failure to engage in preretirement planning. In its most malignant form, the unconscious mental mechanism of denial is invoked. Others fail to recognize the need to make plans. Still others make unrealistic plans which do not take into account changes in financial status, health factors, or adjustments required by a contemplated move.

Sometimes the effects of preretirement may not be apparent until after retirement, when they take the form of a situational reaction or a depression, or contribute to a deterioration of intellectual faculties. Or a crisis may occur weeks or months before actual retirement, when defenses break down or when there is a realization of the inadequacy of planning.

*Psychiatric disorders prevalent in late life*—Most psychoses and neuroses are diseases of young people. A person recovers, or, if the condition becomes chronic, he does not advance to top positions or he does so because he has compensated for his symptoms. Major disorders which have an onset in middle or late life include involutional melancholia and certain chronic brain syndromes.

Involutional reactions often have an insidious onset. The first complaint may be of indigestion, poor appetite, or sleep disturbance. Mild depression may be present before the more malignant depressive symptoms and agitation are noticeable.

Probably the most common type of brain syndrome is that associated with cerebral arteriosclerosis. Among the early symptoms are impairment of recent memory and some emotional instability, often manifested by irritability. The executive with an early arteriosclerotic disorder may deny it to himself and conceal his symptoms from others.

**Implications for Preventive Programs**

Personel policies that keep career lines open are good mental hygiene. Every employee should have an opportunity to advance for as long as he remains with the firm. He does not need actual advancement, but he does need realistic hope. With younger employees, one sometimes does the individual an unkindness by keeping him on when his chances of advancement are limited.

Another policy relates to the handling of executive vacancies. When a position opens, all employees who have reason to think that they would be qualified, whether they are eligible or not, should have the courtesy of an interview, including an explanation of why promotion is not offered and suggestions for steps to achieve a future promotion.

There are middle and top management members who cannot qualify for promotion, no matter what they do. Periodic recognition may substitute for actual advancement. A new title or redecorated office may do more for a man's well-being than a salary raise. People who must be told that they are being passed over need to have crisis intervention and counseling available.

Another program for preventing mental illness is focused upon widening of interests and increasing social contacts. Keeping the executive mentally alert makes him a better decision maker, and better decisions make more money for a profit-making concern and help other types of organizations achieve their individual goals.

Mental health education is valuable to executives. It is important for them to recognize early symptoms of psychiatric disorders in themselves and in those who report to them. For the older executive, it is particularly important that he recognize the symptoms of involutional melancholia and brain syndromes.

**Implications for Clinical Practice**

The industrial physician and family doctor can benefit from an awareness of problems which beset administrators late in life. It is important to be alert for symptoms of mild depression. Differentiation between mild depression and boredom is important, not because the latter is any less serious but because treatment is different. For mild depression brief psychotherapy and possibly antidepressant medications may be prescribed. For boredom, the physician may use direct advice and counseling and, occasionally, stimulants. Either condition may be masked by hypochondriacal symptoms, complaints focused on overeating and weight gain, or increased alcohol use.

Just as one assumes that the older executive may be depressed until it is certain that he is not, consideration needs to be given to the possibility of arteriosclerotic brain disease. Mild memory impairment and mild emotional instability are clues that can be overlooked, but they will not be missed by the clinician who is alert to the possibility and recognizes that early diagnosis will be essential in order to prevent irreversible complications.

# Psychological Studies of Aging in Pilots

JACEK SZAFRAN

Studies of age changes among pilots have been undertaken for two reasons: this group offers advantages for differentiation between effects of aging per se and those of cumulative pathology; early detection of deterioration in flying personnel in command of high performance aircraft is a concern of aviation medical consultants.

The design of our experiments reflects that fact that flying requires making high-speed decisions and detecting low probability and low intensity signals, as well as ability to receive and retain significant amounts of information in routine control procedures.

In the theory of the human operator of control systems the concept of "channel capacity" is fundamental, since the efficiency of coding and decoding operations performed by the brain is assumed to depend on the entropy of messages in time being less than the overall capacity of the system. This formulation has suggested the desirability of evaluating "reserve channel capacity" in the face of "information overload" and reduced signal-to-noise ratio.

Information theory assesses the amount of information in events in terms of the uncertainty that is resolved. If signals are arranged in a random sequence, the average response latency is approximately proportional to the logarithm of the number of equivalent choices—to the minimum quantity of information that must be extracted from the input to identify it.

The experiment on timing characteristics of high-speed sequential decisions records latencies of responses in serial-choice tasks of known information content and measures their altered characteristics under conditions of increased task load. The technique consists of introducing subsidiary tasks and measuring the effects on the performance of the main task, so that a comparison of average rates of gain of information with and without overload yields estimates of "reserve channel capacity." The task is one in which the subject is presented with a random sequence of visual signals, is required to identify them and then to operate an appropriate control, of the microswitch type, with the maximum of speed and minimum of error.

The "overload" tasks are designed to tax short-term memory and ability to tolerate interference with the aural monitoring of speech.

*Visual accommodation*—Prediction of a reduced ability of the older eye to focus sharp images on the retina at short viewing distances was sustained. Theories of presbyopia usually emphasize the diminished elasticity of the crystalline lens and anatomical changes in the ciliary muscle, but there are suggestions that genetic, dietetic, and climatic factors may be implicated. Even so, it seems doubtful whether anything further could be extrapolated from these variations to provide an "index of aging" in the visual pathway.

*Critical flicker fusion and minimum perceptible interflash interval*—The data fail to confirm the ex-

Condensed with permission from *Aerospace Medicine*, 40(5):543-553, 1969.

pected change of threshold with age. Unfortunately, it was not possible to vary the levels of light-time in the flicker cycle, and the evidence can be regarded as not conclusive.

*Dark adaptation*—The determination of threshold energies confirms the correlation with age at alpha and terminal points. Since the data also reveal lower average values for pilots than those for the general population, we can infer that they are better observers and are able to extract information more efficiently even at low levels of signal-to-noise ratio.

Although the classical theory of vision relates sensitivity of the eye to concentration of rhodopsin, newer theories postulate constant efficiency of the retina and a "variable gain" mechanism acting as an amplifier between retinal receptors and optic nerve fibers. In the case of dark adaptation it may be that time is required to "reset" the gain mechanism to its maximum value. It is tempting—perhaps rash—to expect that the more experienced an observer, the less amplification would be needed to present the information to the brain.

It should be borne in mind that measurements of the resolving power of sensory systems must reflect not only the properties of the peripheral detectors, but also the intelligent use of perceptual skills.

*Tachistoscopic recognition thresholds*—The channel capacity curves are near perfect transmission of information up to about 20 bits. They drop by some 20–25 percent in the presence of "visual noise," and up to 20 percent under division of attention. There is some lowering of performance with increasing age at the higher levels of information input, reflecting the fact that the aging eye, because of miosis and lenticular yellowing, requires more light. A comparison of information transfer functions in the presence of "visual noise" suggests that it is the younger pilots who may be more embarrassed by reduction of the signal-to-noise ratio. The older pilots appear to adopt a more efficient strategy for signal detection, and one which outweighs the limitations imposed by the peripheral end of the visual pathway. Their capacity to deal with the equivocal odds under conditions of divided attention is lower than that of the younger group essentially for the same reason, but very likely also because this involves short-term retention and recall. The differential values for information transfer under "visual noise" and divided attention, as compared with the control, do not reveal a significant decline with age.

*Audiometry*—The important feature of more efficient use of perceptual skills by professional pilots again becomes apparent.

The left ear shows more hearing loss than the right in a greater proportion of cases, and the dissimilarity between the ears becomes more striking for higher tones. The data suggest an increase of the effect with age. The reason is not clear; perhaps it has to do with the fact that pilots move from the right to the left seat in the cockpit when they are promoted to captain, and that the left ear becomes more exposed to engine noise and vibrations.

It is of greater theoretical import that the older pilots do not show more severe change of the "effective threshold" in the presence of white noise input to the contralateral ear. Signal detection under these suboptimal circumstances appears to be uncannily efficient and in spite of increased presbyacusis, there is no evi-

dence of any disproportional loss in auditory discrimination with advancing age.

Perhaps amplification of ambient sensory inflow, in the case of older adults, increases the "gain" of the mechanisms upon which the high-information signal impinges. The increase in "gain" might correspond to a higher level of "vigilance" or "arousal." Or, since the "threshold resistance" data for audiometry and tachistoscopic recognition are intercorrelated, an alternative hypothesis is that change of "strategy" in detecting distorted signals may occur with prolonged experience, and that this change can be relatively immune to the adverse effects of aging in some individuals.

*Rate of gain of information*—Estimates of "channel capacity" in the baseline condition are not related to age; the traditional association between advanced age and slowing of decision is challenged.

Only in the short-term memory subsidary task are age and error correlated. Perhaps older pilots are relatively more susceptible to the effects of information overload if this involves short-term recall when some other activity intervenes during the period of retention. But there arises the question of whether a difference of the order of 0.3 bits/second in the rate of gain of information can be regarded as indicating any substantial loss.

Interpretation of these findings is speculative. They would support the conclusion that age differences in psychological and physiological tests may be more revealing when observed under condition of stress than under baseline or resting conditions. Insofar as skill proficiency can be evaluated outside the flying situation itself, the routine aspects of the pilot's skill are unlikely to be seriously affected by aging over the usual span of normal working life.

The data on the rate of gain of information under conditions of task overload appear to be related to the cardiopulmonary status of the pilots, who—needless to say—are in perfect health from the clinical standpoint. The evidence suggests that investigations reporting slowing of response with age included subclinical cases of cardiovascular disorders.

It is tempting to entertain the possibility that the analytical operations performed by the brain in a high-grade skill are more likely to depend upon the efficiency of the lung-heart system than upon age as such. If it is plausible that "neural noise" within the central nervous system increases with age, it is not unreasonable to suppose that a reduced rate of cerebral blood flow may contribute to the hypothetical random activity in brain cells.

This evidence here raises one point of importance—that it would be rash to conclude that the capacity for discrimination and choice, when examined within the overlearned repertoire of adult professional life, need necessarily decline with advancing age in normally healthy individuals.

# Psychosocial Factors in the Adjustment of Patients with Permanently Implanted Cardiac Pacemakers

WILLIAM A. GREENE and ARTHUR J. MOSS

A decade has passed since the introduction of cardiac pacemakers for the treatment of patients with heart block and other arrhythmias. There has been little attention to the psychological adjustment of patients and the effectiveness of their prolonged life with this device. The adjustment of all patients with permanent cardiac pacemakers who have been followed at Strong Memorial Hospital is reported here.

The study began with the assumption that adjustment involves two interrelated aspects: how the patient adjusts *with* the pacemaker, and how the patient adjusts *to* the pacemaker. It was postulated that adjustment would be a function of pacemaker effectiveness, ancillary disease, social resources, and personality style. It also was expected that the majority of patients would have appreciable anxiety about the pacemaker.

Sixty patients who had pacemakers implanted before January 1, 1968, were studied. Fifty were transvenous, and 10 were transthoracic. The median age for the transvenous patients was 73 years, while the transthoracic patients were younger—65 years. The survival to date has been about 80 percent for the entire group and each subgroup.

The marital status at the time of pacemaker implantation included a surprising number still married after 50 years. Fifty percent were married, a third were widowed, and the rest were separated, divorced, or single.

There was considerable variation in type and duration of the main prodromal symptoms. These include episodes of recurrent confusion and weakness which patients generally refer to as "being dizzy," frank Stokes-Adams attacks, and symptoms of congestive heart failure. For two patients no specific symptoms were referable to the heart block. While a few patients developed symptoms acutely leading to immediate pacemaker implantation, most had symptoms for months or years.

Pacemaker adjustment has been arbitrarily divided into an acute adjustment period, which includes the insertion of the pacemaker and a one-week postoperative course in the hospital, and a subacute phase, from one to six months after implantation. In the acute adjustment period chronic confusion and weakness and the Stokes-Adams attacks are improved or relieved in 90 percent of the patients. Concurrent clearing in the associated delirium also occurs, and many patients are pleasantly surprised "to be with it" again. Symptoms of congestive failure or the associated delirium are not appreciably improved by pacemaker implantation.

Of the 50 patients who survived longer than three months, 73 percent made an excellent acute adjustment, many with a prompt increase in level of awareness. Their main complaints are with pain in the battery site. Most

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patients go through a stage of circumspection during which they are reassured by experience that they are not going to become dizzy or pass out again. This is sometimes referred to as depression, but we think it is a period in which they are reconnoitering before they start moving out again. Most patients are up and moving about within 48 hours with increasing confidence. How patients have adjusted to other common prostheses such as eyeglasses, dentures, hearing aids, and artificial limbs (one hand and one leg in our series) may be of help in prognosticating adjustment to the pacemaker. Patients who gave a history of poor adjustment to such prostheses exhibited a higher incidence of pacemaker concern or rejection than those who did not.

Some patients with a favorable pacemaker adjustment developed minor pacemaker-related problems with transient apprehension or annoyance but without major concern. Four patients were distressed by diaphragmatic contractions that subsided in three to five days. Several men patients have been embarrassed and had to endure some kidding by fellow patients about the pacemaker looking like a breast. Several women patients have been horrified at the sight of the incision and the frequent extensive ecchymoses around the implanted battery. Two fainted on first seeing this in the mirror.

During the acute adjustment period 21 percent manifested relative pacemaker concern—chiefly whether the battery would continue to function. During this period explanations and reassurance can be of some value, but most important is lack of symptoms and successful functioning. Three additional patients could be characterized as having pacemaker rejection. These three patients expressed a preference for dying rather than living with the pacemaker. They initially refused the pacemaker but were persuaded to undergo the implantation and they continued to express regrets about living and having the pacemaker, for weeks or months.

Estimates for adjustment in the subacute phase also apply to the 50 patients. During this six-month phase 80 percent manifested pacemaker acceptance, many with enthusiasm and increased activity. Seventy-two percent showed improved self-care. Some patients experienced a further clearing of delirium. Many resumed hobbies—gardening, housework, and travel—and reestablished interpersonal relationships with spouses, children, and grandchildren.

Half the patients with a spouse had been participating in a degree of sexual activity before the development of symptoms. Generally, sexual activity had subsided or ceased during the period of symptoms. After the pacemaker implantation the majority of these patients resumed sexual activity at the same level as before the development of symptoms. Those who were not married resumed their prepacemaker sexual practices. Patients with transthoracic pacemakers exhibited more apprehension about sexual practices than did the transvenous patients; this concern was shared by the spouses. One with a transthoracic pacemaker felt that his electrode wire break occurred during intercourse, and another with the battery implanted in the anterior abdominal wall believed that erosion of the skin over the battery site was related to intercourse. Two women had a marked increase in libido for a period of several months, and then returned

to their customary sexual interest. Two men developed impotence with the onset of the symptoms of heart block and remained impotent after the pacemaker was implanted.

How the patient adjusted *with* the pacemaker as well as *to* the pacemaker was a function of how the pacemaker worked. Pacemaker problems were divided into acute-phase problems (mainly catheter repositioning); later phase unanticipated problems (wire breaks, positioning, battery failure, and skin erosion); and later-phase, anticipated problems (mainly elective battery changes). The greatest number of these problems occurred in the later phase. Generally patients who had acute-phase problems manifested anxiety, where those with later-phase unanticipated problems manifested anger and depression.

These observations indicate that a number of factors are important in a positive patient adjustment with and to a pacemaker. Ancillary good health, effective pacemaker function, and a meaningful interpersonal relationship (a spouse or an attentive son or daughter) provide a good setting for a satisfactory pacemaker adjustment. Patients who have had symptoms for a long time before pacemaker implantation adjust better than those with a short symptom prodrome. Those with acute symptoms have to adjust to the situation of being sick as well as having the pacemaker inserted, and their concern in relation to becoming sick seems to be displaced onto the pacemaker.

Of some importance is personality style. Four men who were "loners" adjusted quite well to the pacemaker as long as they were permitted to return to their long-time irresponsible, isolated existence. Three women who were long-standing hypochondriacal personalities did not manifest appreciable concern with the pacemaker but continued with their concern about symptoms related to bowels, digestion, and headache. Three patients have become psychotic, and two have been admitted to a mental hospital. In two patients the psychosis was functional, and in one the psychosis was on the basis of delirium. The content of paranoid psychotic manifestations did not involve concern with the pacemaker but rather with persons in the environment. Age, sex, and socioeconomic status were not important factors in patient adjustment.

Most patients have adjusted well to the pacemaker, and many have had an amazing relief of symptoms and a rejuvenating lease on life.

Problems that continue to require solution are the need for pacemakers with more reliable functioning and the philosophical question of whether to insert a pacemaker in an elderly patient with coexisting and at times debilitating disease. A potential problem is one that applies to many therapeutic advances in medicine, new drugs, new procedures, and new devices such as the pacemaker. As the novelty and investigative interest associated with the new therapy wears off, the patient gets less attention, and there may be a decline in support from the physician. We think that the survival and the adjustment of this group of patients have been made possible by the pacemaker but that the extent of adjustment has been a function of their relationship with the cardiologists and particularly with their personal physicians.

# Instability of the Central Nervous System

R. M. Meschersky and G. SH. Rozenschtein

Most workers agree that inhibitory processes are the basis for the production of habituation. But there are no generally accepted opinions as to the nature, localization, and mechanism of this inhibition.

Most detailed has been the investigation of localization of inhibition. According to one view, the reticular formation plays the most dominant role. Habituation may be attributed to either peripheral mechanisms, "parareceptor factors," or corticofugal influences.

According to these views, the mechanisms of habituation are restricted by the limits of one and the same sensory system or are connected with the interaction of specific projection systems and the reticular formation. The interaction of several projection systems during the development of habituation has not been studied to any extent.

Experiments were conducted on cats and rabbits immobilized with D-tubocurarine. The experiments were started about three hours after cessation of ether narcosis.

The first experiments were conducted on 12 rabbits. Habituation was produced by using repetitive light flashes from an impulse lamp of a photostimulator located 30 centimeters from the rabbit's eyes. Evoked potentials were recorded from the visual cortex. All responses were recorded in order to follow the complete dynamics of change in evoked response occurring during the development of habituation.

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The second experiments were conducted on 17 cats (encéphale isolé). Habituation was produced in the auditory cortex using a sound stimulus (click) of maximal intensity. Simultaneously with the presentation of sound, light flashes were presented to the eye contralateral to the hemisphere from which auditory responses were being recorded.

Habituation developed in two to four hours, and its dynamics conformed to the usual picture. After the development of habituation, an extrastimulus produced dehabituation. Secondary habituation usually occurred faster than the first. Habituation was produced one to three times.

The initial phase in the production of habituation was characterized by undulating changes in amplitude of the evoked potential and followed by a steady decrease in potential. In some experiments there was a short phase of greatly increased evoked potentials immediately before habituation.

In most experiments this phase of facilitation was quite short, and there sometimes appeared from five to 15 responses of increased amplitude occurring either as two or three increased responses separated by normal responses or else as a train. In only one experiment did this phase of facilitation last for several minutes, and on this occasion the high amplitude responses occurred first sporadically and then as a continuous train. Sometimes the facilitation phase was indistinct in that one or two responses of slightly greater than normal amplitude occurred. After dehabituation, facilitation was generally less clearcut

during the elaboration of a second habituation. Occasionally the facilitation phase was greater after dehabituation than during the first elaboration of habituation.

When the results of the first were compared with the second experiments, a facilitatory phase was observed in 70–80 percent of the tests with habituation being produced in the visual analyzer and only 40–50 percent in the tests when habituation was being produced in the auditory analyzer. This difference may be due to the difference in experimental animal.

In 12 experiments the development of habituation in the auditory cortex to repetitive clicks was paralleled by a facilitation of response in the visual cortex to a threshold light flash such that the response became more consistent and the amplitude increased. During dehabituation the responses in both auditory and visual cortices return to near normality. In three experiments facilitation in the visual cortex was undulating. Reciprocal changes in evoked potentials as recorded in the auditory and visual cortices were observed in some experiments and also before the appearance of habituation during the phase of undulating changes in amplitude of response in the auditory cortex.

In five experiments no reciprocal relationships were observed between auditory and visual cortices. The visual cortex responses to maximal and threshold light stimulation characteristically showed no difference in amplitude. In some of these experiments, habituation was produced in the visual cortex.

Two observations were made in the present work: before the development of habituation there was a phase of facilitation of the evoked potential, and against a background of developing habituation in one analyzer there occurred facilitation of other analyzers as if "switching attention" to a different analyzer had occurred. The phenomenon we have observed may be explained if we accept unstable automata as models for the brain.

Known functional models may be divided into two groups: stable and unstable models.

*Stable models* are systems with unlimited time of existence. Where the functional pay-off of the system is additive then $P(t_1+t_2)=P(t_1)+P(t_2)$ where $P(t_i)$ is the "pay-off" received by the system in time $t_i$ so that the goal of a stable system is usually to maximize "pay-off" received by the system per unit time.

Unstable models are systems with limited time existence. Their goals are to maximize "pay-offs" received in the total time of existence. In view of this limited time of existence of the system, "pay-off" received is always finite.

It is presumed that there are "harmful" states among the states of the "unstable" model. If the system receives a unit "pay-off" in unit time, the goal of the system will be to prolong its time of existence, i.e., to maximize the time before transition to an absorbent ("harmful") state. Let us assume that an unstable system can change its external environment. By changing its environment, the system may prolong the time before switching to a "harmful" state. "Switching" of the environments appears to be an indispensable condition for the prolongation of existence of an unstable system. By analogy with biological systems this property may be called "activity."

Unstable stochastic automata are used as examples to introduce the concept of unstable models. Stochastic automaton $D$ has $n$ states ($A_1, \ldots A_n$). For each state there is a definite value of the output variable $r(i)$ ($r\epsilon$1, $\ldots n$). At any time $t(t=1,2, \ldots)$ the automaton functions in one of $q$ random environments $S_v$ ($v\epsilon$ 1,2, $\ldots q$). For any fixed pair of indices $i$, $k$ ($i,k_v$ 1, $\ldots$ n) and fixed environment, $S_v$ assumes an existence probability $P_{ik}(S_v)$ for the transition of the automaton from state $A_i$ to $A_k$ at time $t+1$ while under the influence of environment $S(t+1)=S_v$. The choice of environment in which the automaton functions at time $t+1$ depends on the value of the output function at time $t$, i.e., $S(t+1)=\phi[r(t)]$. The stochastic matrix $P(S_v)=||P_{ik}(S_v)||$ and the output function $r(i)$ completely define the behavior of the stochastic automaton.

State $A_i$ of a stochastic automaton is called "absorbent" if for any environment $S_v$ the probability of transition is

$$P_{ik}(S)=\begin{matrix}1 \text{ for } i=k\\ \\ 0 \text{ for } i\neq k\end{matrix} \qquad (k=1, \ldots n)$$

Automaton $D$ is called unstable if in a finite time it falls into an "absorbent" state with a probability other than zero.

The existence time of biological systems is the same as for unstable automata, i.e., finite. Complex biological systems poorly tolerate remaining in an invariable external environment. Thus monotonous input to the CNS leads to anxiety, motor restlessness, distortions of perception, and sometimes hallucinations. Such behavior in a biological system may be explained as the approach of a system to a "harmful" (absorbent) state which exists in each stationary environment and is analogous to the behavior of an unstable automaton which may be described by matrices with absorbent states in each environment.

If the unstable automaton is considered as a formal model of CNS activity, then our observations may be explained as follows: High-amplitude potentials which appear immediately before the production of habituation may be considered as a signal of an impending "harmful" state. When the system approaches a "harmful" state in one environment, it switches to another environment. This other environment may be any sensory field. In those experiments where facilitation was not observed in the visual cortex during habituation in the auditory cortex, it may be that there occurred a switching of attention to some other analyzer. The undulating character of facilitation in the visual cortex can appear as a result of repeatedly switching attention to another sensory system.

The result of our experiments is consistent with the view that biological systems can be described in terms of unstable models. The essential feature of organization of biological systems appears to be instability. A determination of the set of standard "external environment" should make it possible to use the switching time (rate of habituation) as a measure of the instability of a biological system.

# Brainstem Pathways of Reward

ARYEH ROUTTENBERG and CHARLES MALSBURY

In spite of speculations relating the self-stimulation phenomenon to reticular formation function or differentiating the former from the latter, the evidence makes it difficult to specify the precise nature of the relationship.

In this study 132 male and 2 female albino rats were used. Skinner boxes were programmed so that depression of a lever allowed the subject to obtain no more than .5-second duration brain stimulation.

The subjects had no food for 24 hours before surgery to facilitate induction of pentobarbital anesthesia. Bipolar nichrome wires were aimed at a variety of tegmental and brainstem nuclei. Each subject received only one electrode placement.

Three to 7 days following the operation, behavioral testing began. Most subjects were run for two or three overnight sessions to hasten acquisition of the bar-pressing response. All subjects were then run 15 minutes a day, 7 days a week, for 20–25 consecutive days.

Following behavioral testing, subjects were sacrificed or subjected to dc lesions through the stimulating electrodes. The subjects demonstrating self-stimulation behavior prior to the lesion were assessed for the adequacy of the lesion by additional self-stimulation testing; in all cases, self-stimulation scores were reduced to operant levels. Five days following the lesion, subjects were sacrificed.

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**Brainstem Mapping**

Self-stimulation occurred in "extrapyramidal" areas which have not typically been associated with the phenomenon; highest rates of self-stimulation were found in anterior midbrain only; and "reticular formation" electrode placements did not yield significant self-stimulation.

*Very high rates*—Highest rates of self-stimulation were encountered in the region of the fibers and nucleus of the ventral tegmental decussation, the ventral tegmental area of Tsai, and substantia nigra. Highest rates of self-stimulation were found only in the most anterior and ventral regions of the midbrain. Posterior midbrain, pons, and medulla did not yield such rates.

*High rates*—Posterior placements were located in and around the tract of the mesencephalic nucleus of V and the superior cerebellar peduncle (brachium conjunctivum). In the self-stimulation group were two additional subjects with placements in the substantia nigra, confirming the unexpected importance of the extrapyramidal structure in reward effects. One placement in the medial aspect of the medial lemniscus completed the placements in the high self-stimulation group.

*Moderate rates*—As rate of self-stimulation decreased, the range broadened. The site of self-stimulation of two subjects was immediately caudal to the red nucleus, situated in the rubrospinal system. Stimulation in one subject involved either nigral or lemniscal elements or perhaps both. Three subjects were erratic in self-

stimulation performance; the placement of one was in the superior cerebellar peduncle and the other two were in the cerebral peduncle. Another subject with consistent self-stimulation performance had its electrode tip in the ventral central gray, immediately adjacent to the superior cerebellar peduncle.

*Low rates*—Stimulation of the medial lemniscus yielded low rates of self-stimulation in six subjects. Electrode loci were also found in the rubrospinal tract and between that tract and the ventral tegmental decussation; the electrode placements of three subjects with similar low self-stimulation rates were located in a boundary region ventrolateral to the central gray, impinging upon the motor nucleus of V, the nucleus of the lateral lemniscus, and the superior cerebellar peduncle.

*Neutral rates*—Perhaps the most salient result was the absence of self-stimulation in subjects whose electrode placements were in reticular formation. It seems nearly impossible to state that a stimulated region is only reticular formation since fibers of passage are inevitably present.

*Placements yielding aversive effects*—Medial lemniscus stimulation produced aversive effects in two subjects; lateral lemniscus stimulation produced aversive effects in six subjects. Further investigation, using fine electrode wire, of reward aversion within the medial lemniscus itself seems warranted.

**Degeneration Following Lesions at the Self-Stimulation Site**

*Degeneration from sites yielding high self-stimulation rates*—The most remarkable aspects are the nearly identical patterns of degeneration in two subjects. Several pathways could be traced from the self-stimulation site: mesencephalic root of V fibers to motor nucleus of V; uncrossed ascending limb of brachium conjunctivum or superior cerebellar peduncle (UALB); crossed ascending limb of brachium conjunctivum (CALB); crossed descending limb of brachium conjunctivum (CDLB).

The projections from the mesencephalic nucleus of V to the motor nucleus are well-known and have been observed following lesions of the former structure. The UALB remained in the ventrolateral edge of the central gray and gave off fine "terminals" to the ventrolateral portion of the central gray from the point of lesion to the most rostral location of central gray in midbrain. Terminal-like degeneration was also seen in nucleus of Darkschewitsch. A small number of fibers was seen to pass on through midbrain to the arcuate and lateral ventral nuclei of the thalamus.

The CALB separated from the UALB at posterior midbrain levels crossed in the decussation of the peduncle, and bifurcated to form the CALB and the CDLB. Concerning the CALB, a large majority of fibers appear to terminate in the red nucleus. The remaining fibers turn dorsally and run to the lateroventral thalamus passing through $H_2$ field of Forel and zona incerta before reaching their thalamic destination. The CDLB after passing through the decussation of the peduncle turns ventral and caudal. Fibers go to the tegmental reticular nucleus and at more caudal levels appear to terminate in pontine and medullary reticular gray.

*Degeneration from sites yielding medium self-stimulation rates*—Would differences in degeneration pattern reveal the causes for the

difference in self-stimulation rate? The most significant feature of the comparison was that one subject had mild and one subject had no major degenerattion in the red nucleus. As this was a major projection from the high reward sites, it might not be unreasonable to suppose that this projection was important for sustaining high rates of approach behavior. Nonetheless, self-stimulation did occur without this projection suggesting that other structures were involved.

*Degeneration from sites yielding no reward*—In two cases there was no discernible projection to the red nucleus via the crossed ascending pathway of the superior cerebellar peduncle. There was, however, a projection involving the uncrossed ascending limb, and some descending fascicles were noted as well.

We would like to suggest the hypothesis that the red nucleus may occupy an important position in receiving inputs related to reward, both from lower brainstem and from diencephalon The discharge from the red nucleus would then be based on the integration of the inputs to it and would, in some way, control motor responding via rubrospinal and tegmentospinal systems.

Two lines of evidence support this view. Mapping experiments have revealed that the primary loci for reward in anterior midbrain were in the region of the ventral tegmental decussation and substantia nigra. The former contains the crossed efferents of the red nucleus. The latter has several major outputs, the most prominent being the nigrostriatal tract (comb bundle). Another output of substantia nigra is a crossed pathway to the contralateral red nucleus via the supramammillary decussation. As this pathway yields very high rates of self-stimulation, this nigral output may represent one critical pathway related to reward. Self-stimulation effects were also obtained from the output of (rubrospinal system) and from the input to (brachium conjunctivum) the red nucleus.

The second line of evidence was derived from impregnation of degenerating axons passing near the stimulating electrode. Lesions made with electrodes implanted in regions yielding high rates of self-stimulation brought about intense degeneration in the contralateral red nucleus. Those that showed reduced rates or lack of self-stimulation similarly showed reduced or no degeneration into this structure.

Alternative interpretations are possible. The evidence that suggests the involvement of the red nucleus is circumstantial. It will be necessary to demonstrate that self-stimulation in brachium conjunctivum can be reduced or eliminated by lesions in the contralateral red nucleus. Also, it is not yet possible to rule out the contribution of the uncrossed ascending pathway of the brachium conjunctivum or to ignore the possible importance of the nucleus of Darkschewitsch. Experiments employing experimental anatomical and electrophysiological techniques in combination with behavioral testing should assist in specifying the critical pathways.

# Intracranial Self-Stimulation and the Rapid Decline of Frustrative Nonreward

Roger N. Johnson, Peter Lobdell, and Ronald S. Levy

When behavior is controlled by central stimulation, it has been reported that performance is impaired in simple learning tasks involving schedules of reinforcement and rates of extinction. Some investigators have found that some differences disappear when procedural details are closely controlled to make the comparisons more meaningful. Other differences, such as sharp performance decrements with ICS after short time intervals are not typical of conventional learning and remain to be explained.

Our experiment is designed to test the generality of time-based performance decrements with ICS with the use of the conventional frustration paradigm not yet tested with brain stimulation.

Six male albino rats were implanted with bipolar electrodes aimed at the lateral hypothalamus. The apparatus was a modified double runway with a goal box enclosed at the middle and at the end. A fixed lever in each goal box could be pushed five times on each trial with every response resulting in 0.3 second of sine wave stimulation of about 185 $\mu$a. In pretraining, rats learned to press a lever for ICS in an apparatus outside the runways, and a current level was established which would maximize the reinforcement value.

Subjects were used as their own controls. Each rat was tested in six sessions, one for each combination of motivational state (20–23 hours, hungry and fed) and confinement period (5, 15, and 25 seconds). The criterion was five successive trials in which running time did not vary more than $\pm$ .03 second. Then 18 experimental trials were run including nine control trials and nine randomly presented test trials (frustration trials) in which ICS was not delivered. The intertrial interval was 45 seconds, and each rat was given five noncontingent pulses of ICS in the start box at the beginning of each trial to control for possible aftereffects of the previous trial (10 reinforcements on control trials and only five on test trials).

The magnitude of the frustration effect is a function of confinement time in goal box No. 1. With the running time during the nine unrewarded control trials for each animal used as a reference, when subjects were hungry and confined for 5 seconds they ran faster to the second goal box. This positive frustration effect is eliminated when the same animals are tested after 15 seconds confinement. At 25 seconds, there is a suggestion of a reverse or negative effect. When the rats were fed and tested after a 5- or 15-second confinement, there was no significant frustration effect. At 25 seconds, however, a significant negative frustration effect was obtained, indicating that the animals ran more slowly after frustration trials.

These findings are different from those obtained with conventional reinforcement. Our results show that, if the reinforcer is ICS, frustration dissipates completely in 15 seconds and becomes a reverse effect after 25 seconds.

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# Implications of New Theories and Research for Concepts of Child Development

EUGENE S. GOLLIN

It is important for those who do research on child development to converse with those who are concerned with the welfare of children. Those concerned with guiding and influencing the growth and development of children—parents, teachers, social workers, psychiatrists, ministers, and applied psychologists—are confronted by reality. The researcher lives in a never-never land which he deliberately fabricates. He must detach himself from emotional contexts, isolate and control factors, challenge truisms, question basic beliefs, be wary of intuition or common sense. This makes it difficult for him to converse with parents and professionals who are confronted with demands in the daily life of children.

There are difficulties in such an exchange. We often speak a different language. A danger lies in the tendency of researchers to arrogate to themselves a role of authority. The worker in the field is too ready to accept the authoritatively offered quick, easy solution. The title of this paper, "implications for child development," implies that the user in the field has work to do. The professional in daily contact with children must do something to affect the course of development of an individual child, must be creative.

The phrase "new theories" might better be "new information." Psychologists are showing restraint with respect to theorizing and more concern with acquiring information. Psychology, someone said, is revolting—in both senses of the word. To understand the revolt requires a look at the last 50 years, especially at those aspects of tradition that have the greatest influence.

Condensed with permission from *Child Welfare*, 48(5):284-288, 1969.

### Trends in Child Development Studies

First, there was a period, still continuing, of descriptive studies that relied on questionnaires, paper and pencil tests, observations of children in various settings, ratings of children's behavior on numerous scales, etc. We had, and have, countless sets of norms. The norms are statistical abstractions. The norms of one decade are not necessarily the norms of the succeeding, nor are norms based on one sample necessarily reflective of other samples. The norms are descriptive; they tell us nothing of causality, or processes of change. They are frequently abused, in that children who deviate from them are consigned, justifiably or not, to some category of pathology.

A second trend might be called "mother research." Psychologists were impressed that one thing all children had was a mother. Psychoanalytically inspired studies, frequently disguised as something else, were undertaken, and still are. Their aim was to demonstrate the mothers' influence on children. Factors of mother's personality were correlated with factors of child's personality. A jargon arose: permissive, restrictive, demanding, achieving, aggressive, submissive, etc. Even fathers were occasionally rated. These procedures yielded matrices of intercorrelations. The literature is re-

plete with correlations between mother and child, IQ and child, social status and both, birth order and IQ, sex and everything else, and almost any measures a candidate for the doctoral degree could dream up.

Scanning these tables reveals that the correlations are generally low, that when the level rises there is frequently contamination of variables, and that in discussing such things it is the practice to ignore the low ones and concentrate on the few that reach conventional levels of statistical significance, a practice logically indefensible.

A third trend has been the psychoanalytically and neoanalytically inspired studies of child development. The advocates have, by and large, been content to assert a doctrine of man, a set of assumptions and derivations for which evidence is sparse. This position is a social movement and not a scientific enterprise. Its practitioners are manifold. Its jargon has become part of our vocabularies. It has little relevance for many of today's pressing problems.

**Manipulative Techniques**

There has been an increasing tendency in the science of human development to introduce experimental manipulative techniques—to bring child psychology within the framework of general psychology, to test hypotheses rigorously, to attempt not only to survey behavior, but to move it about. This has led to some interesting, and hopefully important, developments. For example, experimental examination of behavior in the first year of life is being conducted. Techniques have been developed that permit studies of behavioral change in the earliest days of life.

The research has made us aware that notions of time of onset and maturational readiness require reevaluation. It has led many to question the concept of maturational readiness as it is typically used—as an excuse for our inability to modify behavior in socially desirable directions. We are able to accelerate or retard the onset of a variety of behaviors. By varying training we facilitate or retard concept learning, problem solving, and other behaviors.

Whether it is wise to do so in terms of cost to the child remains a question to be resolved by research. This does not imply that maturational factors are not at work, but rather that we must regard them in a different light. For the present, we may note that the interactions of experience with genetic and nutritive factors have become inextricable.

**Performances as Symptoms and Response**

In education we have been made aware of the power of new ways of presenting material and the value of regarding the young child as capable of masteries that a few years ago would have been unthinkable.

We have learned to distrust performance on standard tests, in social interaction situations, and in experimental contexts. This distrust stems from observation that a change in context or task arrangement frequently leads to success where previously it had led to failure.

In certain task arrangements, 3-year-olds yield performances similar to 18-year-olds. They use different techniques to generate these performance similarities, and we must not be deceived by end-products. Performances are like symptoms; they may reflect many things. Good clinicians in every

diagnostic field have known this. Good researchers attempt to penetrate beneath performance to learn about process. If the researcher can learn about the *how* of behavior, he will be able to make recommendations about modifying behavior.

In intervention programs it would be a mistake to concentrate exclusively on content. Current research makes it appear that the most efficient training will address itself to means, not ends, to techniques of adaptation and adjustment.

Another area of research likely to have striking consequences is the area referred to as sensory deprivation. The animal studies are clear. The higher in the evolutionary scale an organism is, the more vulnerable it is to severe privation.

With children there is, obviously, no experimental literature. There are, however, children who in the early months and years of life are reared in environments of relative privation. It is difficult to assess the permanence of the effects—we suspect they may be profound. What is hopeful from the vantage point of experimental approaches is the development of tools and techniques for exploring the nature of privation-induced deficits, and from the knowledge gained, for generating corrective procedures.

### Revolution in Knowledge

If there is any attitude that the behavioral scientists would like to convey, it is one of tolerance of ambiguity. The scientist deals with the provisional; he attempts to avoid emotion-based beliefs (he rarely succeeds); he should regard his ideas and techniques as tools in the service of knowledge. The tendency to hold on to concepts like Developmental Age, IQ, and MA and to dated formulations of heredity and environment, or maturation and learning, illustrates the power of tradition.

A human being grows from a fertilized egg just large enough to be visible to the eye, and weighing about one twenty-millionth of an ounce, to a body of adult size and a weight of about 150 pounds. An even more startling and impressive change is the functional change. A single-celled organism divides, forms cell aggregates, organ systems, and balance mechanisms; develops motility, responsivity, consciousness, self-awareness, refined motor functions of the most exquisite precision and coordination, higher psychological functions, including finely nuanced emotional responses, ability to learn and adapt to a variable environment, ability to remember and planfully to contemplate the future.

Researchers are trying to gain comprehension of the factors that influence this fantastic complex of processes and events. An open mind and reliance on common sense will be useful to all who work with children, as we attempt to understand and utilize the revolution in knowledge that is upon us.

# Characteristics of After-Care Patients

CHARLES B. WILKINSON and ROBIJN K. HORNSTRA

In the early stages of their development, aftercare clinics drew clientele consisting principally of patients discharged from inpatient wards. Increasing numbers are now drawn from other areas, e.g., transitional services. Aftercare can also prevent even initial hospitalization, i.e., what is called an "aftercare" clinic is really a "precare" clinic.

Most aftercare clinics take on a familiar appearance from a descriptive point of view. An established clinic usually consists of long-term patients who are maintained at a socially acceptable level of functioning by the use of drugs, and perhaps some brief form of "talk therapy" at prearranged and consistent intervals. Most of the clientele are classified in the judgment of the referring psychiatrists as patients who are not likely to benefit from individual or group forms of therapy. Diagnostically, most of the patients are considered to be psychotic (many in remission) with varying degrees of chronicity. For many patients, aftercare services have become an interminable feature of their lives.

There are several ways in which aftercare services may be misused. One results from the search for the "good psychotherapeutic risk." Rather than dismiss a patient still in need of care, a transfer is made to aftercare. It would appear impossible to prevent the negative attitude of the referring service from being reflected to the patient.

A second type of misuse is a result of failure of middle-class professionals to understand the way of life of the patient in the lower socioeconomic category. They view his status with hopelessness. To provide the patient with "something," aftercare becomes the modality of choice.

A final type of poor referral relates to crisis intervention. Often at times of crisis, psychiatric intervention over a short period is sufficient for the immediate situation and any attempt to provide followup is unwanted and even resisted. Many of these patients have been referred to aftercare. This referral reflects the misconception of the functions of a community mental health center; personnel feel that they must provide something for everyone once the patient presents himself to the center.

Even excluding inappropriate referrals, the clinic cannot avoid a steadily increasing number of long-term patients. Personnel find themselves with such a massive load that shortage of time permits only a brief recitation of symptoms by their patients with opportunity for only a quick inquiry into possible drug side effects. Unless personnel are participants in the total rehabilitation of the patients in their charge, their work is likely to become monotonous and unrewarding. If the clinic situation does not permit adequate appraisal of conditions, then timely intervention, which could move a patient from chronicity to active treatment, can be missed.

Some clinic patients will not be "dischargeable." All aftercare clinics point with pride to a roster of patients who, for example, with as few as quarterly visits over 12-month periods

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Condensed with permission from *Diseases of the Nervous System*, 30(4): 246-250, 1969.

are able to avoid being hospitalized. For the majority of the remaining patients there is not much optimism, and unless unusual and ingenious methods are developed, ennui and apathy are likely to overtake most clinics.

Studies of aftercare clinics have been carried out over the past seven years in the Psychiatric Receiving Center and the Western Missouri Mental Health Center in Kansas City.

The results of these projects show that aftercare patients fall into two groups: long-term attenders (from four visits to four years); and short-term attenders (less than four visits and including clinic dropouts).

In the first study a review of 224 records of consecutive referrals over a 12-month period showed that 62 percent of the patients returned to the clinic for three visits or less. These patients took an "optimistic" view of their future and ability to maintain their improvement without followup. The other 84 patients continued attendance for four or more visits. They considered the clinic to be an important part of their postdischarge life.

Diagnosis had little bearing on attendance, but other factors played important roles. The long-term attenders tended to have more previous hospitalizations and 50 percent were in the hospital more than four weeks. If they lived in a nuclear family there was a tendency toward a longer stay in the clinic.

Age, sex, and race as single entities had no bearing on the length of clinic stay. In combination they did, but in a "crazy quilt" pattern. Patients in their twenties and thirties more often made brief use of the clinic in comparison with patients in their forties and fifties. Women remained only slightly longer than men. This slight difference was the result of reduced usage by Negro females and increased usage by Negro males. Motherhood and the frequency with which Negro females are the source of support, by work or by welfare, was the principal factor influencing their reduced attendance. There was a high expectancy on the part of the referring physician for long-term attendance of Negro males and white females, which was met with compliance by the patients. This may be a commentary on American life. There is the attitude that in the lower socioeconomic groups the Negro male occupies a secondary position, comparable to the protected position of the white female. Such a view meshes with hospital psychiatrist's view of the "good patient." It will be interesting to note if the growing militancy and the striving for self-identity in the black ghetto influence the psychiatrist's expectancy and patient response on the part of Negro males.

A study of 119 long-term aftercare patients (one to four years) indicated that 33 percent did not return for services during the 12-month project period; 13 patients immediately sought other services in the community; 68 did return, the majority within the first three months. Of the 68, 22 were never terminated because their clinical condition made this inadvisable. The rehospitalization rate for the "termination failures" was 25 percent; the rehospitalization rate of 94 long-term patients not included in the study was 24 percent.

The characteristics in the returnees that differentiated them from the successfully terminated patients were in the category of social involvement. A home visit was conducted during the first week of termination and one year later. To identify meaningful relationships of patients, 11 questions and

answers from the home interviews, which could be analyzed within a single conceptual framework, were selected. One point was given for each answer in which people were mentioned; this was called the People-Relatedness Score. The patients with high People-Relatedness scores were found to be more likely to return.

Each patient was given the same termination message and the response was recorded. Eight visits to discuss termination in group or individual treatment sessions were offered. The responses to termination fell into two categories, agreers or disagreers, with a small group whose responses were inappropriate and were called transcendental. Return for treatment was proportionately higher for those patients who disagreed with the message of termination and lower for those who agreed with termination. Successful termination was unrelated to the length of the terminating period or the method of termination. The unsuccessful terminators had a higher attendance rate for their treatment sessions than did the successful terminators. Among the high People-Relatedness scorers, three out of four disagreed with the message of termination, while among the low People-Relatedness scorers, four out of five agreed with the termination message.

A third study dealt with patient treatment assignments and use of such assignments. Factors other than the presenting symptomatology influenced the psychiatrist's decision in selecting treatment modalities. These factors include the past assignments of patients and their degree of social engagement (marriage, employment and children). If prior assignments have been nonresidential, the immediate assignment is likely to be the same. The more engaged the patient, the more likely is his assignment to be nonresidential. Both of these factors apply to aftercare assignments. The utilization by the patient of these assignments follows the same pattern. Included in the study was material pertaining to 88 short-term aftercare patients or aftercare dropouts. Forty-four of the dropouts returned for treatment and 44 did not return.

One concludes that more care in the selection of patients can reduce the load of patients with which aftercare personnel have to deal. Nevertheless, increased intake throughout all areas of a community mental health center will continue to produce an ever-increasing aftercare load. Awareness of the meanings of the attendance responses of patients referred to an aftercare facility can equip the treating personnel with tools with which they can more adequately make treatment and management plans. With a smoothly coordinated method of terminating those patients who can safely be terminated, rehabilitative efforts can be directed toward that group whose treatment careers seem interminably bound to the aftercare clinic.

# A Lady in Distress: Inhibiting Effects of Friends and Strangers on Bystander Intervention

BIBB LATANÉ and JUDITH RODIN

"There's safety in numbers," and city dwellers seem to believe it. When faced with stress, most individuals seem less afraid when they are in the presence of others than when they are alone.

Ecologists have puzzled over the adaptive functions of such phenomena as schooling in fish and flocking in birds. Such congregations seem designed to make life easy for predators; yet they are widespread. Why? Predators may be inhibited by fear from attacking large troops of animals, and may be "confused" by the presence of many individuals. Similar processes may operate in humans.

If trouble comes, individuals may feel more certain of getting help if others are present. While it is true that a victim is unlikely to receive help if nobody knows of his plight, recent research casts doubt on the suggestion that he will be more likely to receive help if more people are present. In fact, experiments show the opposite to be true.

The results may provide insight into such publicized and distressing incidents as the murder of Kitty Genovese, a murder which 38 people witnessed but did nothing to prevent. As in laboratory studies, the presence of others served to inhibit positive action.

These incidents have been cited as examples of "apathy" and "dehumanization" stemming from the urbanization of society. But such terms may be misleading. Studies suggest that situational factors involving the immediate social environment may be of greater importance than such vague concepts as "apathy" or "alienation due to urbanization."

If social inhibition effects are general, they may explain why the failure to intervene seems to be more characteristic of large cities than rural areas. Bystanders to urban emergencies are more likely to be, or at least think they are, in the presence of other bystanders than witnesses of nonurban emergencies. Urban emergencies may differ from emergencies in other settings in that, in the former, bystanders are not likely to know one another. It is possible that the kinds of social inhibition and diffusion of responsibility generated by strangers may not arise from the presence of friends. The purpose of our experiment is to test these possibilities, and to do so in a new emergency setting.

Subjects waited alone either with a friend or with a stranger to participate in a market research study. They heard someone fall and apparently injure herself in the room next door. Whether they tried to help and how long they took to do so were the dependent variables of the study.

Male Columbia undergraduates were selected at random, and offered $2.00 to participate in a survey of game and puzzle preferences conducted by a market research organization. Each person was asked to find a friend who would be interested in participating. Only those students who recommended friends, and the friends they suggested, were used as subjects.

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Condensed with permission from the *Journal of Experimental Social Psychology* 5(2):189-202, 1969.

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Subjects were met at the door and taken to the testing room. They passed an office and through its open door they were able to see a desk and bookcases, piled with papers, and filing cabinets. They entered the adjacent testing room which contained a table and chairs and a variety of games, and were given a preliminary background information and game preference questionnaire to fill out.

The representative told the subjects that she would be working next door for about 10 minutes while they completed the questionnaires, and left by opening the collapsible curtain which divided the two rooms. The representative stayed in her office, shuffling papers, opening drawers, and making enough noise to remind the subjects of her presence. Four minutes after leaving the testing area, she turned on a tape recorder.

If the subject listened, he heard the representative climb on a chair to reach for a stack of papers on the bookcase. Even if he were not listening, he heard a crash and a scream as the chair collapsed and she fell to the floor. "Oh, my God, my foot . . . I . . . I . . . can't move it. Oh . . . my ankle," the representative moaned. "I . . . can't get this . . . thing . . . off me." She cried and moaned for about a minute longer but the cries gradually got more subdued and controlled. Finally she muttered something about getting outside, knocked around the chair as she pulled herself up, and thumped to the door, closing it behind her as she left. The entire incident took 130 seconds.

If a subject intervened, the post-experimental interview was begun. If he did not intervene, the representative waited one minute and then entered the testing room through the the door, visibly limping. The representative asked about the noises next door, their reactions to them, and the reasons for the course of action they had taken, and then explained in detail the purposes of the experiment. Subjects were then paid and asked to fill out an anonymous questionnaire concerning their feelings. Reasons for secrecy were discussed and all subjects readily agreed.

In the interview, subjects were asked to describe what they thought had taken place. All thought the representative had fallen and hurt her foot. Less than 5 percent reported any suspicion that they had been listening to a tape recording. All subjects in the Two Strangers condition reported that they were unacquainted before the experiment.

The majority of subjects who intervened did so by pulling back the room divider and coming into the office (61 percent). Few subjects came the roundabout way through the door to offer assistance (14 percent), and a small number (24 percent) chose the easy solution of calling out to offer help. No one tried to find someone else to whom to report the accident. Thus all interveners offered some kind of direct assistance.

Seventy percent of all subjects who heard the fall while alone in the waiting room offered to help the victim. By contrast, the presence of a nonresponsive bystander markedly inhibited helping. Only 7 percent of subjects in the Stooge condition intervened. These subjects seemed upset during the emergency and frequently glanced at the passive confederate who continued working on his questionnaire. Will the same social inhibition occur when two naive subjects are tested together?

The results show that members of a pair had a strong influence on each

other. In only 40 percent of the groups of subjects in the "Two Strangers" condition did even one person offer help to the injured woman. Only eight subjects of the 40 run in this condition intervened. The presence of another person strongly inhibits individuals from responding, and this inhibition is not a function of some artificiality of a stooge's behavior.

Pairs of friends often talked about the questionnaire before the accident, and sometimes discussed a course of action after the fall. Even so, in only 70 percent of the pairs did even one person intervene. While, superficially, this appears as high as the "Alone" condition, there must be a correction for the fact that two people are free to act. Friends were less likely, and they were also slower, to intervene.

Although pairs of friends were inhibited from helping, they were faster to intervene than were pairs of strangers. The median latency of the first response from pairs of friends was 36 seconds; the median pair of strangers did not respond at all within the arbitrary 130-second duration of the emergency.

The results show that the victim is no better off if two friends hear her cry to help than if only one person does. When the bystanders are strangers, social inhibition was so strong that the victim actually got help significantly faster the fewer people who heard her distress. In this instance, she would be foolish to count on safety in numbers.

Although the interview began differently for the interveners and noninterveners, all subjects were encouraged to discuss the accident and their reactions to it before they were told about the tape and the purpose of the experiment.

Subjects who intervened usually claimed that they did so either because the fall sounded very serious or they were uncertain what had occurred and felt they should investigate. Many talked about intervention as the "right thing to do" and asserted they would help again.

Many noninterveners also claimed that they were unsure what had happened, but had decided it was not too serious. A number of subjects reported that they thought other people would help, and three said they refrained out of concern for the victim—they did not want to embarrass her. The important thing is that noninterveners did not seem to feel that they had behaved callously or immorally. Subjects almost uniformly claimed that in a "real" emergency, they would be among the first to help.

When subjects were asked whether they had been influenced by the presence or action of their coworker, they were unwilling or unable to believe that they had.

After the interview, debriefing, and payment of $2.00, subjects were asked to fill out a final questionnaire concerning their mood and their reactions to the experiment. Subjects were convincingly assured that their answers would be entirely anonymous and the experimenter departed.

The idea of "safety in numbers" receives no support from the results. Two lines of explanation seem plausible. The first involves the workings of social influence processes, and the second the concept of "diffusion of responsibility."

A bystander to an emergency must first come to some interpretation of the situation, and then, choose what to do. Many emergencies are ambiguous. A crash and sounds of sobbing might have indicated a girl with a

badly injured leg, but it might have meant nothing more than a slight sprain and a good deal of chagrin.

In deciding what interpretation to put on a particular configuration of emergency symptoms, a bystander will be influenced by his experience and desires as well as by what he sees. If other people are present, he will be guided by their apparent reactions. Unfortunately, their apparent reactions may not be a good indication of their feelings. Apparent passivity and lack of concern on the part of bystanders may simply mean that they have not had time to work out their interpretation or that they are assuming a bland exterior to hide their inner uncertainty and concern. In public, Americans generally wish to appear poised and in control of themselves. It is possible for a state of "pluralistic ignorance" to develop, in which each bystander is led by the *apparent* lack of concern of the others to interpret the situation as being less serious than he would if he were alone.

If an individual decides that an emergency is in process and that something ought to be done, he is faced with the choice of whether he will intervene. His decision will be made in terms of the rewards and costs associated with the courses of action open to him. The presence of other people can alter these rewards and costs. If one bystander is present, he bears 100 percent of the responsibility for dealing with it; he will feel 100 percent of the guilt for not acting; he will bear 100 percent of the blame others may level for nonintervention. If others are present, the onus of responsibility is diffused.

Both the "social influence" and "diffusion of responsibility" explanations seem valid, and there is no reason why both should not be jointly operative.

How can we fit friend-stranger differences into this framework? It may be that people are less likely to fear embarrassment in front of friends, and that friends are less likely to misinterpret each other's inaction. If so, social influence may be less likely to lead friends to decide there is no emergency. It also may be that individuals are less likely to lay responsibility on their friends, reducing the effectiveness of responsibility diffusion.

When strangers overheard the emergency, they seemed confused and concerned, attempting to interpret what they heard and to decide on a course of action. They glanced furtively at one another, apparently anxious to discover the other's reaction. Friends seemed better able to convey their concern nonverbally, and often discussed the incident and arrived at a mutual plan of action.

The results suggest situational reasons why large cities may be less safe than smaller towns: Even if there be an equal likelihood of getting involved in an emergency, the presence of many strangers may prevent you from getting help. There may be safety in numbers, but these experiments suggest that if you are involved in an emergency, the best number of bystanders is one.

# Purchase of Conformity: Ex-Narcotic Addicts Among the Bourgeoisie

BRUCE BULLINGTON, JOHN G. MUNNS, and GILBERT GEIS

Attempts to buy desired patterns of behavior underlie much of American life. Employers presume that hirelings will perform in stipulated ways for which they will be rewarded with a salary. Parents use bribes to motivate children to carry out tasks and to adhere to certain behavior. The power of fiscal suasion has been used to induce mental patients to abandon withdrawn states for a return to normal living.

The Boyle Heights Narcotics Prevention Project was established when Federal funds for work with addicts in poverty areas became available. Activities include counseling, job referrals, and work with families. The streetworkers respond to telephone calls from addicts or those referring addicts, testify for clients in court, seek out individuals requiring help, and deal with a stream of business which finds its way into the center.

A second program element is work by former addicts in two junior high schools. A dozen ex-addicts have met with health education teachers in 20 workshops dealing with issues relating to drugs, and four ex-addicts have made classroom presentations.

The streetworkers had been abstinent from opiates while on the streets for a minimum of six months and for a median of two to three years prior to their employment. They average 37 years of age, with a range from 22 to 65. About two-thirds are Mexican-Americans, a fifth whites, and the remainder Negroes. They had attended school, on the average, through the tenth or eleventh grade, with about a fifth of the group having some college work.

Our research included interviews with the 31 ex-addicts on the project payroll. We also examined the results of psychological write-ups on each worker and the findings of intake interviews aimed at gathering sociologically relevant information about the lives and careers of the workers. Finally, we reviewed more than 500 pages of field notes accumulated during the first year of the project to discover items bearing upon the project's success in the purchase of conformity.

*Becoming bourgeois*—The most obvious indicators of adoption of middle-class standards emerged when subjects began to voice views that are echoed in the suburbs lying adjacent to the semi-deteriorated Boyle Heights area. One streetworker observed that he was pleased that the project paid $600 a month since he realized that it would have been impossible for him to live on anything less.

There were changes in dress style, particularly after group pressures mounted against one worker who wore unbuttoned sports shirts, a working attire that came to be defined as "improper." Four months after inauguration of the project, one streetworker appeared at a night function wearing a white shirt for the first time. Asked about it, he replied that he had read in *Playboy* that colored shirts were not to be worn after six o'clock.

Condensed with permission from *Social Problems*, 16(4):456-463, 1969.

Perhaps the worker who, learning that he was to be given an administrative assignment, bought a briefcase epitomizes the emergence of middle-class responses. Equally revealing was the experience of the addicts assigned to the schools. Often better dressed than the teachers, they were suspected by the pupils of being narcotic agents. Not until each man showed a copy of his "mug" shot was pupil suspicion allayed.

Virtually all employees indicated that they were spending much more on food, clothing, or living quarters than they ever had in their lives, and 19 of the 31 were spending more on all three.

Most interesting were two findings. The first was that the salaries paid the employees were below the maximum amounts that almost every former addict had earned legitimately or stolen at some period in his life. The second indicated a division among the workers in regard to how they saw their financial situation now that they were working on the project. Twelve claimed that it was no different, twelve that it was better, and seven that it had deteriorated.

*The professional scene*—There is evidence of adoption of bourgeois styles and affiliation, but salary alone was not the reason. What appear more significant are features of the street-worker role itself, which allowed intimate observation and colleague (rather than client) interaction with a system heretofore remote and mysterious. The workers gained a distinct understanding of the creature comforts of professional work in contrast to manual labor or other closely supervised employment. They learned that "subprofessional" status has advantages that create feelings of well-being and allow avoidance of indignity and more serious kinds of trouble. They developed contacts with individuals in social service and employment agencies, which buoyed their confidence regarding their future occupational alternatives.

The project served as a laboratory for the transmission of social skills. The administrators of the project intervened in workers' traffic violations and settled domestic disputes, many of which would have led the men back to prison for violation of parole. The workers became able to duplicate this kind of mediation between themselves and a system of protocol they at first only barely understood. They became adept at learning how best to manipulate prospective employers, since they are forced to develop strategies, such as soft-pedalling past violations and highlighting virtues, to obtain work for their clients.

Among the more noteworthy commitments that the project was able to evoke was a burgeoning dedication to social service as a career. Closely related were responses indicating a rise in self-esteem, tied to enhanced feelings about job marketability. Many reported they had formed associations with community agencies which would be valuable if they needed work, and there was recurrent mention of the new skills in job hunting and personal relationships.

The liberty of social service work was summarized by one man: I'm used to starting work at 7:00 A.M. and getting a couple of 10-minute breaks during the day. Here we drink coffee at 8:30 A.M. and take long breaks all day.

Such vocational self-indulgence was not all to the good. There was much

restlessness because of the relatively unstructured nature of their tasks, and because they were expected to impose self-discipline.

Equally impressive were the comments concerning the inadequacy of the professionals with whom they came into working contact. It may be presumed that their original attitudes toward social workers and correctional officers overestimated the competence of such authorities as a function of carefully cultivated social distance.

*Men on the margin*—A serious discrepancy between the blueprints of the project and its actuality came into focus. The discrepancy was fed by the belief of the administrators that assumption of middle-class roles by the workers would jeopardize their effectiveness and undercut the fundamental rationale of an effort employing former addicts to help practicing addicts.

This view was heard when the men sought guidance regarding techniques in dealing with particular cases. They were told that they would have to reach their own decisions, since *they* were the experts on such matters. This operational posture created a barrier between the workers and their assumption of clear-cut professional roles.

This marginality, trapping the workers in the no-man's land between their former lives and those presupposed for them by the project designers, was voiced in numerous ways. One worker complained that the project was inculcating a mood of passivity and complacency among Mexican-American clients. Such passivity, he felt, ill-served the group's need for political awareness and restiveness.

The requirement that the workers come into close association with practicing addicts also hindered their deeper absorption into the ranks of the middle class. Most viewed such association as vital to their own well-being, since it provided them with a raison d'etre and supplied them with vivid cautionary material regarding what they had been and could again become. Associations with practicing addicts could have taken the form of the workers' locating strengths in their clients which resembled their own assets and supporting such attributes, or locating weaknesses and, out of their own fear, feeding these weaknesses in order to buttress their image of themselves as properly distinct from the addict subculture. Field observations indicated that the workers were never able to resolve this dilemma satisfactorily.

# The Paranormal Dream and Man's Pliable Future

STANLEY KRIPPNER

In recent years the scientific community has become interested in such phenomena as psychokinesis, telepathy, clairvoyance, and precognition. Telepathy has been accorded the widest acceptance, because it is supported by more evidence and it least offends common-sense notions. With precognition, the situation is different. Precognition, man's purported knowledge about future events, offends notions of cause and effect as well as concepts about the nature of time.

Parapsychologists have collected cases in which predictions have come true, but the fact that researchers do not know the number of similar predictions that failed to come true presents a hindrance to interpretation.

Experimental work can be cited to support precognitive phenomena. Parapsychologists have asked subjects to predict the order in which cards, designs, or numbers would be arranged at some later date. For example, subjects have guessed the order in which each card in a stack would come up. The order was determined by a computer after each subject had completed his predictions. When the subjects' guesses were matched with the actual card order, the results were significant.

Many parapsychologists feel that altered states of consciousness are more amenable to extrasensory perception (ESP) than is the waking state. Freud conjectured that dreams might afford understanding of ESP because of "the incontestable fact that sleep creates favorable conditions for telepathy."

Condensed with permission from the *Psychoanalytic Review*, 56(1):28-43, 1969.

Precognition, as well as telepathy and clairvoyance, is said to characterize the paranormal dream. Premonitions are frequent whether the dream is reported for personal interest, psychotherapeutic purposes, or research in a sleep-and-dream laboratory utilizing electroencephalographic techniques. Paranormal dream data collected at the Maimonides Medical Center include several instances of possible precognition, although the experimental design was structured to elicit telepathic effects. By the end of 1968, eight experiments had been completed, most of which utilized electroencephalographic monitoring of rapid eye movements to detect periods of dreaming.

*Experiment I*—Twelve volunteers spent one night each at the Laboratory. Two staff members, one male and one female, alternated as agents or senders, attempting to influence the subjects' dreams by means of telepathy. Target pictures were famous art prints, randomly selected from a large number of prints once the subjects had gone to bed. On the following morning, the subjects matched their dream recall against the collection of target pictures, selecting that print which most closely resembled their dreams. These matchings proved to be statistically significant. Three outside judges did the same matching using the prints and transcripts of the subjects' dreams. The matchings were not significant. However, the judges matched dreams and targets from the male agent's subjects more accurately than they matched from the female agent's subjects. A fourth judge used a different matching procedure and

matched dreams and pictures from all subjects at a significant level of accuracy.

*Experiment II*—The most successful subjects and the better agent were selected. Following a seven-night study, the subject matched his dreams against the collection of prints at a statistically significant level of accuracy. Three outside judges matched the transcripts and the pictures at a level even higher than that attained by the subject. A fourth judge utilized a different matching procedure, producing highly significant results.

*Experiment III*—Twelve different subjects and two agents were utilized in a 12-night study. The results were not significant.

*Experiment IV*—The most successful subjects and the better agent in the third study were paired. The results were not significant.

*Experiment V*—Two groups of subjects were created—a hypnosis and nonhypnosis, "relaxed" group. There were eight subjects in each. All subjects produced waking imagery in the Laboratory and imagery from a rest period in the Laboratory, and kept dream diaries for a week at home. The main evaluation was accomplished by three judges who matched transcripts against the prints. Neither group produced significant results for the waking imagery. For the hypnosis group, imagery produced during the rest period corresponded to the target pictures at significant levels; nighttime dreams did not yield significant results. For the nonhypnosis group the results were reversed. It may be that hypnosis speeded up the process of telepathic processing.

*Experiment VI*—Another successful subject from Experiment I was selected for this 16-night study. Without the knowledge of the subject, an agent concentrated on a target during only eight of the experimental nights; for the other eight nights there was neither agent nor target. Neither condition produced significant results.

*Experiment VII*—The subject and agent who worked together for Experiment II were paired. For each night of this eight-night study, a randomly selected target picture was accompanied by a box of "Multisensory" materials, e.g., a target picture depicting an artist, was accompanied by a canvas and paints so that the agent could spend part of the night "acting out" the artist's role. Three judges evaluated the correspondences between each dream transcript and each print; the results were highly significant. These data suggest that human action and motility reinforce the sleeping subject's contact with the agent and visual target.

*Experiment VIII*—A subject was obtained who had been successful in a telepathy experiment at another laboratory. Every morning, following the experimental session, the subject discussed his dreams with a psychoanalyst. For this eight-night study, the subject's judgings and the ratings of an outside judge were significant.

Although these eight experiments were designed to explore the telepathic process, there were instances in which precognition appeared to be present. Precognitive phenomena were especially apparent in Experiment II. Perhaps the occurrence of precognition interfered with the occurrence of telepathy. The dreams of three demonstrate the presumptively precognitive process.

One subject was a female psychologist. The agent, a male, randomly selected Goya's "The Parasol" as the target picture. Although the subject's

first dreams centered around the target (girl holding a green parasol), later dreams contained several correspondences to a target which was subsequently selected for another subject. This target was "The Actor Danjuro V in the Part of a Feudal Lord" by Sunsho; it depicts a Japanese actor in a red and yellow robe.

Another subject was an educational research worker paired with the female agent. The target was Sunsho's "The Actor Danjuro V in the Part of a Feudal Lord." The subject's dreams closely corresponded with the target picture. They also corresponded with Manship's "Prometheus," the target used for a third subject. The Prometheus theme was prominent in the educational research worker's dreams about a policeman, the draft board, an argument, and a thermometer. In addition, he had one dream pertaining to his personal life which he thought might have been precognitive in nature.

Another subject was a male actor; he worked with the female agent who selected Manship's "Prometheus" as the target picture. The subject seemed to incorporate many themes from the target into his dreams. However, the most remarkable correspondences were between his dreams and Homer's "The Gulf Stream," which was later selected by the male agent for still another subject.

The subject was surprised to see "The Gulf Stream" in the target pool when he did the judging, and immediately selected the painting as the target which had been used during his experimental session. It is possible that the subject's mention of the Homer painting was precognitive, as it was randomly selected for use several weeks later. Or the subject's statement may have been coincidental, because no procedures had been built into this study to investigate precognition.

An analysis of over 7,000 spontaneous cases of a presumptively paranormal nature revealed dreams to be the most frequent vehicles of these occurrences. Dreams appeared to contain a more complete picture of the future event than did daytime hunches, waking images, or similar experiences.

Little experimental work had been done to investigate the psychological arena in which precognition occurs spontaneously. One reason is the threat that precognition seems to pose to the concept of "free will."

Future philosophers may record that the birth of parapsychology as a science produced results which challenged such concepts as "free will" and "compulsion," thus leading to their clarification. These riddles still exist, but experiments in precognition have produced such provocative data that some of the world's most brilliant minds are wrestling with this mystery of human existence.

# The Therapeutic Paradox

HARVEY R. ALDERTON

It might be supposed that the more sick the patient the more likely he would be to receive intensive treatment. The individual with a malignant neoplasm will usually receive more vigorous therapeutic approaches than one with a trivial, benign condition.

The consequences of this distinction in the therapeutic situation are not always appreciated, and this can have the effect of reversing the treatment process. Under these circumstances the more sick the patient is, the *less* likely he is to receive adequate help.

This paper describes the origins and effects of some factors resulting in this paradox in the inpatient treatment of children with severe primary behavior and personality disorders, and comments briefly on its avoidance.

### The Therapeutic Paradox in the Outpatient Setting

The paradox has been recognized in the outpatient setting. Studies have shown that of those seeking psychiatric services, the intelligent, well-educated, highly motivated and verbal middle- or upper-class neurotic patient receives a disproportionate amount of psychotherapeutic time.

The adverse case selection is true of clinics for children. Children with antisocial behavior rather than neurotic symptoms, manifest, as adults, the most serious disturbances, including psychoses. Yet they are least likely to continue as outpatients. They are more apt than neurotic children to rebel against clinic attendance, tend to arouse counterhostility in staff, and are much more difficult to maintain in therapy.

### The Therapeutic Paradox in a Children's Inpatient Setting

Since children are not admitted on their own volition, the paradox cannot be resolved by the patients who are most unwell leaving voluntarily. They are likely to remain within the setting but to receive less treatment than those not so disturbed. (This is also true of adults who lack the resources, or legal right, to discharge themselves.) The paradox may be hidden from the staff working in this setting as in the outpatient department. A difference is that it is even less apparent to those outside. This is because the patients remain, and are very sick. It is more difficult to discern that they are getting less treatment. The essential issue is that when very disturbed children are admitted, the occurrence of the paradox is much less likely to be recognized than in an outpatient setting.

### The Therapeutic Process

In the conceptual framework which has appeared helpful, attention is focused on the nature of the beliefs the child holds concerning himself and others. These have served to introduce order into the child's world and reduce anxiety by enabling him to predict and control.

An essential role of treatment is to change pathological beliefs through interactions occurring with others. As far as possible, the behaviors should be dealt with in such a way as to avoid their further reinforcement.

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**Origins of the Paradox**

*Lack of confirmatory feedback of adult beliefs*—When examining the treatment process, attention must be paid to the adult's beliefs about others and himself. Beliefs concerning therapeutic effectiveness are highly valued by those involved in treatment, and confirmation may be obtained in a number of ways: appreciation, respect or affection from the patient, and evidence of improvement. The more seriously disturbed the child the less likely is he to provide confirmation of essential adult beliefs with resulting anxiety and sometimes considerable guilt or anger.

*Adult failure to initiate interaction*—When interaction must be initiated by the child, those who make the fewest approaches receive the least adult responses. Some children who are more seriously ill will obtain little staff time or therapeutic opportunity, unless the treatment frame of reference includes the belief that a high level of interaction must be maintained.

*Monopolization of the adult*—Even children who can approach the adult or with whom interaction is usually initiated may be relatively overlooked. This is so if the staff become preoccupied by those who are highly rewarding or attractive to them, attention seeking, or in need of considerable external control. This can be avoided by ensuring adequate interaction when the opportunity arises.

*Dependence of adult behavior on cues from the child*—Sometimes therapeutic staff behavior occurs only in response to a cue from the child. It does not occur spontaneously because it is not frequent or habitual and unless arising from an internal treatment belief depends upon an external stimulus. An example is the child who never asks his counselors to look at his school work. Those who feel most dissatisfied with their achievements are often least able to approach the adult or believe in his interest.

*As a response to increased behavior disturbance*—When behavior regarded as pathological increases, the effectiveness of treatment tends to diminish. This is so not only because the behavior becomes more difficult to deal with, but the apparent deterioration is threatening to the staff's concepts of effectiveness. It is ironic that this increase may result from the child's efforts to reestablish the expected adult behavior, a sign of treatment effectiveness. Consequent untherapeutic adult responses may then inadvertently serve to provide the confirmation the child seeks. Once this is obtained his anxiety may fall and with it the increased behavioral disturbance. Confirmation is thus obtained of false beliefs held by both child and adult. Treatment has come to a halt as well. Increased disturbance in the child can only be attributed to this mechanism after careful scrutiny; other factors including inappropriate therapeutic attempts may be responsible.

**Staff Responses to These Influences**

The foregoing result in various antitherapeutic adult behaviors. These include:

*Increased attempt to elicit the desired response*—Staff approaches may increase but since the desired response is so important to them signs of disapproval or disappointment are likely if it is not elicited. Increased approaches based on positive therapeutic considerations must of course be distinguished from this.

*Use of inappropriate techniques*—Certain approaches may be untherapeutic because the child's frame of reference results in the reinforcement of beliefs we wish to change. This may occur unintentionally owing to the adult assuming that the child's viewpoint is the same as his own.

For example, a child's lack of response to reflection of his feelings might best be met by acceptance, with little or no comment. A need to feel therapeutically active may lead the adult to respond by provision of information, clarification, reasoning, or questioning the child's distortions. Failure to obtain behavioral control by other methods may result in physical restraint or removal, not because these are required, but to provide proof to the adult of his therapeutic ability.

Particular techniques may be contraindicated if the child is not yet ready to respond to them or does not need them. When accompanied by signs of anger, the effect of inappropriate techniques will be even more adverse. The relief their use may give the adult makes it likely they will be used repeatedly.

*Elicitation of compensatory response*—Threat to one important aspect of the self belief may be offset by successful confirmation of another. Hostility toward the child may be countered by eliciting expressions of affection or regret from him. Similarly the capacity to control him physically may compensate for a failure to obtain his affection. These responses are likely to be used excessively and with pressure, since their purpose is to sustain a threatened adult belief.

*Diminished interaction with the child*—This is usually an unconscious process. Sometimes it is recognized but attributed to the child by rationalizing that he prefers to be alone. The less rewarding he is, the fewer approaches tend to be initiated by staff. Whatever its origins, reduced interaction lessens the probability of altering the child's beliefs.

*Attribution of disturbance to intrinsic disorder*—This adult response conceptualizes behavior as arising wholly from internal factors, thereby diminishing anxiety from failure to achieve results. This cannot result in effective treatment since the model is inappropriate when interpersonal interaction is the therapeutic agent. Custodial care, authoritarianism, and reliance on medication (rather than use of medication to facilitate learning in the milieu) take the place of appropriate treatment methods. This may be seen when there is an increase in the child's difficulties.

An allied concept is that of lack of positive treatment response due to severity of past traumata. Effectiveness of interpersonal treatment methods will be increased by the belief that although traumatic events may have initiated pathological behavior, these have persisted as a consequence of reinforcement.

It does not follow that these are necessarily alterable. It may not be possible to change the learning situation and it is conceivable that psychological influences of any sort might be without useful effect. It is not generally possible to predict the extent to which change can take place. The staff need to believe in the possibility of favorably influencing their patients, yet be able to accept the inability to do so without defensiveness. This capacity is not easy to achieve.

**Means of Avoiding or Overcoming the Therapeutic Paradox**

Two sources of the paradox may be distinguished: dependence on the child for confirmation of important beliefs and reliance on him for the elicitation of interaction.

An individual may be regarded as therapeutic to the extent that his activity is determined by appropriate treatment principles. He will be untherapeutic to the degree that his behavior is not governed by such an internal reference point.

Staff capacity to accept and tolerate negative feelings toward the child reduces the likelihood that untherapeutic behavior will result. Such feelings become less frequent as perception of the child changes and his difficulties becomes less personally threatening. Therapeutic beliefs are not automatically self-sustaining but need external reinforcement. This must take place not through the child, but by peer group support identification with therapeutic senior staff, and maintenance by ongoing examination and discussion.

The essential aim is the development in the staff of a therapeutic ego-ideal as well as the technique necessary to implement it. Involved in this are staff selection, content and methods of training, and nature of interstaff relationships, particularly with those in a supervisory role.

Awareness of the paradox and its origins is a step in its avoidance or resolution. This phenomenon is so contrary to staff expectation that it is essential to discuss it explicitly. Staff need to know that there is nothing magical about milieu therapy. Good intentions do not guarantee therapeutic change, and the child's difficulties may be increased by inappropriate treatment. The use of terms such as "illness" and "treatment" carry implicit assumptions regarding the therapeutic process; in particular that the more disturbed the patient, the more treatment he will receive.

# Comprehensive Preparation for Group Psychotherapy

THOMAS F. MCGEE

Preparation for group psychotherapy has tended to be underemphasized and narrowly construed. Preparation is a time-consuming and arduous task, yet it should not be separated from the experience one encounters in therapeutic groups.

### Institutional Preparation

Therapeutic endeavor cannot be separated from the culture of the institution in which it is operated. While an institution may promote the acceptance and development of a group psychotherapy program, one should expect to encounter hidden resistances. In many instances they should be anticipated, and regarded as an index of achievement.

The group therapist about to start or expand a program in a mental health setting should enlist the support of upper echelon personnel. He should also engage in preliminary educational effort with individuals who will be directly involved with and critical to success of the program. This includes staff persons who might refer individuals to therapy groups, sponsor groups on their service, or actually become involved in establishing and operating a group.

The demands of group therapy are great in terms of institutional tolerance, physical requirements, and human logistics. Rooms larger than traditional interviewing rooms will be required where privacy can be guaranteed, and large numbers of people will congregate in waiting or therapy rooms. Effects may be an increase in noise, more people making demands upon clerical personnel, and more attention required for housekeeping chores. Subtle resistances to the enterprise may arise. An individual may be assigned to a psychotherapy group and may find himself in another activity at the same time the psychotherapy group is meeting. Or negative feelings may emerge toward the group therapist or therapy program.

Paramount importance should be given to two factors. The first is that negotiations not be limited to top echelon personnel or to clinical personnel. Ancillary mental health personnel, such as mental health aides, should be involved and an attempt made to educate them to the needs, demands, and possible results. Specifically involved are secretarial personnel who have influence over reception and routing of patients, maintenance personnel who are involved in setting up and maintaining the physical space required, and security personnel who control the keys which will determine whether space will be available at a specific time and date.

The second factor is need for continual education and openness around the group therapy enterprise. This can be likened to the working through aspect of psychotherapy. The establishment and growth of an effective group psychotherapy program is evolutionary, occurring over a period of time, It is important that those involved in the development of group

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psychotherapy keep in active contact with all individuals involved.

Only after such steps are taken can the group therapist be sure that his own resistances to group psychotherapy are under control and that he is working toward a program that will promote group psychotherapy. The group psychotherapy endeavor will have taken a step toward achieving parity with other treatment modalities, particularly individual psychotherapy. It will not be relegated to second-class treatment or "trash-can therapy," as so frequently happens.

**Preparation of the Prospective Group Member**

There has been a tendency to pay only cursory attention to the preparation of the prospective group member. Such an approach appears to assume that a new group member will miraculously appear and remain with the group. It also overlooks the possibility that the relationship established between the group member and therapist in the preparatory period can provide an adhesive and stabilizing force during a group member's early participation.

Some degree of preparation is necessary for every individual about to enter a therapy group; if this is not done, the group therapist must question his own motivations. The preparatory period must be solely between the group psychotherapist and the prospective group member. By the time a preparatory interview is scheduled, the group psychotherapist should have familiarized himself with all available information on the candidate.

At the time of a preparatory interview, the group therapist should be reasonably certain that the candidate will be acceptable for the group. One phase of the interview is to acquaint the therapist and candidate with one another, to answer questions about the candidate such as his interpersonal resources, and to permit the candidate to ask questions of the therapist. Another phase is directed toward preparing the candidate for the group psychotherapeutic experience.

It is important that the individual come to a preparatory interview without being told explicitly why he is there. The presentation of group psychotherapy as a form of treatment and the contract for group psychotherapy should be presented at the culmination of this interview. If an individual is told over the phone or by a secretary that he is to come for an interview about an assignment to group therapy, this enhances the possibility that he will appear with his resistances heightened, or that he will fail to appear. If the prospective group member appears for an interview in which he is to "discuss treatment recommendations" one can acquire a more dynamic understanding of the individual, of his emotional difficulties, and of his potential for group psychotherapy.

The initial phase of a preparatory interview need not focus on group psychotherapy. Rather, the preparatory period should begin as an open-ended interview in which the therapist can engage himself with the candidate to learn how he projects himself interpersonally, to make him more comfortable in the interview and relatively accepting of the idea of group psychotherapy as this is introduced. If the prospective member is not suitable for the group or if the therapist decides he cannot work with this person

in a specific group, no group contract has been broached to him and the therapist is not obligated to take him. In this case, the therapist should take the lead in making other treatment arrangements. If the therapist feels that the candidate can profit from group psychotherapy, the next step is to raise the idea of participation. Rather than asking, "How would you like to be a member of a psychotherapy group," it is more revealing to ask, "What are your feelings about group psychotherapy?"

Such an approach does not commit the psychotherapist to accept the prospective member and provides more ground to explore resistances toward group psychotherapy. If the therapist begins to work toward exploration of these resistances, it is easier for the candidate to enter the psychotherapy group in a more open, realistic manner. The candidate can enter what may be an anxiety-producing experience with some understanding and reassurance which can enhance his stability and interaction during early participation in the group.

Many individuals are reluctant to enter a psychotherapy group. Fears of "second-class treatment," confidentiality, and sharing of the therapist arise almost immediately. Some are mentioned, others arise as fantasies. The preparatory interview provides a place where the prospective member can learn that such feelings and fantasies are common and open for discussion, especially as the therapist strives to elicit them. This phase helps set the stage for the types of material a group member should feel free to discuss in subsequent group psychotherapy sessions.

Once this phase is completed, the therapist should provide a description of group psychotherapy and his approach to it. Following this, a more specific description of the particular group for which the candidate is being prepared should be offered. If neither therapist nor patient have questions, the candidate is given a formal invitation to join. Even with such attention to detail and encouragement some individuals may decline. In this case, they should be given time to reflect about their decision and encouraged to participate in another interview. Ultimately, the individual's wishes must be respected.

Assuming that the candidate accepts the invitation, a final facet of preparation remains. Many items such as fee setting, attendance, notification in case of absence, and duration of therapy can be handled during the preparatory interview. Effective group member preparation means that group psychotherapy has been started before the candidate enters the group.

#### Therapist Preparation

Therapist preparation as utilized here is different from the usual considerations as to the training and supervision of the group psychotherapist. Therapist preparation involves some assessment of the therapist's own motivations. The therapist should acquire his preparation from other individuals in the setting, from his own experiences, and from a review of group therapy potentialities and need which exist in this setting. No group therapist should contemplate the development of a group therapy program or the development of new therapy groups in a vacuum. He should be aware that a variety of groups different in therapeutic cli-

mate, goals, intensity, and composition can operate within the same setting. He should be familiar with the culture of the institution in which he proposes groups, as well as its theoretical orientation. A major part of his preparation consists of an assessment of groups in operation if a group therapy program is underway, and of what new groups are needed and will be most effective. If no groups are in operation, the group therapist should be realistic in his ambitions to start a group psychotherapy program.

The group therapist should be cautious about entering a mental health setting as "the expert." Many psychotherapy groups that fail are started for expediency and derived from therapist needs rather than from a review of patient, institutional, or training needs. While therapist needs always play a role in the development of any therapy program, they should not play a primary role. The therapist about to develop a group psychotherapy program or establish new groups should evaluate his plans and goals with other group therapists in this setting. If none are available, his ideas should be reviewed with a group psychotherapy consultant.

Therapist preparation is crucial if a new therapist is about to enter an ongoing group. The new therapist should have a thorough grasp of the group's culture, history and development, and an understanding of each current group member. If possible, the incoming therapist should gain this understanding from intensive discussion with the previous therapist and/or supervisor. He should read histories and progress notes, and listen to recordings of the group, if available.

Additional preparation is required if co-therapists are employed. Adequate therapist preparation then implies that they will begin developing and examining their relationship before they enter the psychotherapy group.

**Preparation of the Psychotherapy Group**

Preparation of the psychotherapy group is a moot question. Should members of an ongoing group be prepared for new members? One approach is to evaluate the tvpe and intensity of the group. If the group is one in which members come for a short time and terminate as new members are taken in, it is not important that the group be prepared for each new member. If the ongoing group were to be prepared for each new member, one out of every three or every four sessions might be devoted to this topic. In such groups a group life is established which facilitates the movement of new members into the group as old members move out.

Many intensive psychotherapy groups operate on a long-term basis. Here it is appropriate that the group discuss both termination of members and entrance of new members. If the group is informed of new members a week or two before they enter the group without explicit information about their identitv or needs, this provides the therapist and the group with a platform from which fantasies about new members can be explored. Such fantasies are frequently rooted in feelings toward dependency, sharing, and attitudes toward authority and siblings. As the exploration and discussion of such fantasies are an important part of therapy, there is potential therapeutic gain associated with the preparation of the ongoing psychotherapy group as a final facet of preparation in group therapy.

# Mental Health and the Law

## Recent Cases

**Timothy F. Leary v. United States, U.S. Supreme Court, May 19, 1969**

The Supreme Court unanimously reversed Dr. Leary's conviction for knowingly transporting, concealing, and facilitating the transportation and concealment of marihuana without having paid the required tax under 26 U.S.C. ¶4744(a)(2), and knowingly transporting, and facilitating the transportation and concealment of marihuana which had been illegally brought into the United States with knowledge that it had been illegally brought in under paragraph 21 U.S.C. ¶176a.

The tax violation was reversed because the statutory and regulatory provisions that make it illegal for anyone to obtain marihuana without first signing an order form and then paying a transfer tax were held to violate the Fifth Amendment privilege against self-incrimination.

Internal Revenue Service regulations required that applications for order forms must show the name and address of the transferer and the transferee and their registration numbers. This number is obtained under another section of the statute which provides that all persons who deal in marihuana pay an annual occupation tax and register their names and places of business.

Thus, in the course of obtaining an order form, the court pointed out, Dr. Leary would have had to identify himself not only as a receiver of marihuana, but also as a receiver who had not registered and paid the occupation tax. Another section of the statute directed the information from the order form to be conveyed to State and local law enforcement officials on request. According to the court, transmittal to such officials of the fact that Leary "was a recent, unregistered transferee of marihuana "would surely prove a significant link in a chain of evidence tending to establish his guilt."

This would have been true because at the time of Dr. Leary's failure to comply with the Act in 1965, every State made possession of marihuana illegal for all but a few categories of people such as apothecaries, physicians, common carriers, and certain public officials. People in these exempt categories are either also exempt from the Federal order form and transfer tax requirements or, for their own business interests, would be extremely unlikely to remain unregistered with the IRS. The court said that it follows from this that the class of possessors who were both unregistered and obliged to obtain an order form constituted "a select group inherently suspect of criminal activities." Since compliance with the order form and transfer tax provisions would have required Dr. Leary to identify himself as a member of this "suspect group," the court held that these provisions created a "real and appreciable hazard of incrimination."

In opposition to this conclusion the Government argued that under its regulations no one could register unless his activities are permissable under his State law and that no one could obtain an order form and pay the

transfer tax unless he had already registered. Consequently, the result of the regulatory scheme is to prohibit nonregistrants from dealing in marihuana at all. Therefore, the Government asserted there is no substantial hazard of incrimination at the time of acquiring marihuana because a nonregistrant would have known that he could not have obtained an order form and would never have applied for one.

The Court rejected this argument because it found from both the Act's language and legislative history that it had been the intent of Congress that a nonregistrant should be able to obtain an order form and pay the transfer tax (though at a rate of $100 an ounce rather than at the $1 an ounce rate for registrants). The Court, therefore, struck down the IRS regulations prohibiting nonregistrants from obtaining an order form and paying the transfer tax on the grounds that they exceeded the scope of the regulation-making authority delegated by Congress.

Dr. Leary's conviction for transporting and concealing illegally imported marihuana with knowledge of its illegal importation was reversed on the ground that the statutory provision which directs that in a trial for violation of this section, proof of possession of marihuana alone "shall be deemed sufficient evidence to authorize conviction unless the defendant explains his possession to the satisfaction of the jury," is irrational, arbitrary, and hence unconstitutional. In order to sustain this presumption that the defendant knew his marihuana was illegally imported, the Court said that it must be shown "with substantial assurance that the presumed fact is more likely than not to flow from the proved fact on which it is made to depend." Here, the presumed facts are that the marihuana possessed was illegally imported and the defendant knew it, and the proved fact on which these two presumptions depend is that defendant possessed the marihuana.

The Court concluded that there is not sufficient information "to estimate even roughly the proportion of marihuana possessors who have learned in one way or another the origin of their marihuana." In the absence of any direct evidence as to marihuana smokers' beliefs about the source of their marihuana, the Court considered it relevant to survey the data concerning the proportion of domestically consumed marihuana which is of foreign origin. The Court determined from these data that "a not inconsiderable proportion of domestically consumed marihuana appears to have been grown in this country, and that its possessors must be taken to have 'known,' if anything, that their marihuana was *not* illegally imported." It concluded that "it would be no more than speculation were we to say that even as much as a majority of possessors 'knew' the source of their marihuana." The "knowledge" presumption was, therefore, found to be without adequate foundation and hence in violation of the due process clause of the Constitution.

By holding in *Leary* that the privilege against self-incrimination is a complete defense against prosecution for violation of the marihuana transfer tax provision and that it is a deprivation of due process of law to convict a person for possessing illegally imported marihuana through using the statutory presumption that

the possessor knew his marihuana was illegally imported, the Supreme Court eliminated the means by which Federal officials have prosecuted individuals for illegal possession of marihuana.

There can still be Federal convictions for smuggling marihuana in violation of 21 U.S.C. ¶176(a) and for manufacturing, selling, distributing, or administering marihuana without having paid the required occupation tax in violation of 26 U.S.C. ¶4755(a). In addition, the State laws against possession of marihuana are unaffected by this decision.

The court concluded its opinion with the assurance that "nothing in what we hold today implies any constitutional disability in Congress to deal with the marihuana traffic by other means." It should be noted that because of serious doubts about the constitutionality of the Federal Government simply prohibiting the unauthorized possession of marihuana, Congress in 1937 took the route of prescribing marihuana possession through provisions requiring order forms, transfer taxes, and the presumption of knowledge of illegal importation. That Congress no longer has such doubts is clear from the passage in 1968 of an Act which prohibits possession of a depressant or stimulant drug not obtained pursuant to a valid medical prescription (21 U.S.C. 360a (c)(2)).

It is also of interest that in June 1969 the Supreme Court agreed to rule on the constitutionality of the two provisions of the Federal narcotics laws which are comparable to the two marihuana provisions found unconstitutional in *Leary*. It is not unlikely that present laws prohibiting possession of heroin, for example, without registering and obtaining tax stamps will also be overturned.

It seems likely that as a result of this decision, other legislation prohibiting possession of marihuana and narcotic drugs directly but based on Congress' Interstate Commerce clause powers and not on its taxing powers, will be forthcoming. It remains to be seen whether the anticipated new legislation will be more or less restrictive in its scope and in its penalties.

**Frazier v. Levi, Texas Court of Civil Appeals, April 24, 1969; 37LW 2624**

An application was filed by the guardian of a mentally incompetent woman seeking an order authorizing an operation that would render the ward sexually sterile. The application was based not on medical or physical necessity, but on social and economic grounds only. The guardian was the aged mother of the ward, was in poor health, and was unable to stand the physical, financial, or emotional strain of caring for any more children of the ward. She and her husband were already providing for the ward and the ward's two children, both of whom were mentally retarded. The ward, 34 years old, had the mentality of a six-year-old, was sexually promiscuous, unable to support or take care of herself or her children, but was in good phvsical health.

The Court, unable to find specific statutory or constitutional authority, denied the plea of the guardian. Though the court was sympathetic, it could not authorize a sterilization operation out of the mere general power of a probate court to appoint and oversee guardians of mentally incompetent persons.

**World Psychiatric Association**

The Society for the Organization of World Psychiatric Congresses had existed since shortly after the Second World War and from this it was possible to form—at the Third World Congress of Psychiatry in Montreal in 1961—the World Psychiatric Association. The first President of the Association was the late Professor Ewen Cameron who had played a large part in its development. Founded as an organization of national psychiatric societies, the aim of the Association was to include all such societies in every country of the world, without political or other distinctions. Its membership has grown rapidly and now includes 68 societies in 53 countries.

The Association is governed by the General Assembly, which meets at the time of each World Congress. This Assembly nominates a Committee of 30 members, chosen to represent different nations and different psychiatric opinions, and an Executive Committee, which is made up of the six officers of the Association and is responsible for carrying through its many activities.

Since 1966 the Association's Secretariat, originally established at the Hôpital Sainte Anne in Paris, has been at the Maudsley Hospital in London. At the Secretariat the day-to-day business of the Association is carried out by two multilingual secretaries (the official languages of the Association are English, French, German, and Spanish) under the supervision of the Secretary General and Treasurer, with informal consultation with the other members of the Executive Committee, which meets formally twice yearly. The Secretary General has also recruited a team of young advisers who deal with a particular aspect of the Association's activities, such as individual membership, symposia, and publicity.

The volume of work carried out by the Secretariat is extensive and includes the publication of a bimonthly *Newsletter* and biannual *Bulletin*, which go to all member societies and individual members.

Of the Association's many activities the most complex is the organization of the World Congresses of Psychiatry, which are held every five or six years. The Fourth World Congress, in Madrid, was a considerable success, and planning of the Fifth, which will be held in Mexico in 1971, is underway.

The Association also organizes other scientific meetings in the periods between these Congresses. Smaller regional or interregional meetings have advantages in their own right. Such symposia have been held in London, Khartoum, Frankfurt, Bahia, Milan, Melbourne, Liege, and Nice; others will take place in Aberdeen, London, and Istanbul. A central theme for discussion in the five years between World Congresses IV and V has been, and will be, "Anxiety." Other topics will include: "The Uses and Abuses of Psychiatry," "Psychiatric Epidemiology," and "Treatment and Rehabilitation in Psychiatry."

The organization of these scientific meetings, as well as the promotion of continuing cooperation among workers with similar interests throughout the world, is facilitated by special sections and study groups. These now number

ten, with several more in the formative stages, and range over a variety of subjects: Child and Adolescent Psychiatry, Forensic Psychiatry, Higher Nervous Activity, Nomenclature and Classification and Transcultural Psychiatry, etc.

One of the most important features of the Association's activities is to provide the opportunities for individual psychiatrists—clinicians, research workers, teachers, or workers in other fields—to get to know one another personally, make friendships, learn from each other, and break down the barriers that too often divide human beings. This is, of course, promoted by symposia and congresses. In order to facilitate it further, however, and to enable ordinary members of the Association to participate more directly and personnally in its activities, a special category, Individual Membership, has been introduced. Individual membership brings a number of advantages: A diploma of membership which can be used for professional purposes for as long as membership is continued; priority in the allocation of places, and a reduction of fees for symposia organized by the WPA; regular *Newsletters* and *Bulletins* dealing not only with the Association's activities but also with those of member societies and of international organizations of psychiatric interest, including WHO. Presumably, its most important feature is the provision by the Secretariat of information and introductions to assist Individual members who wish to make personal contact with colleagues or to visit psychiatric institutions. A worldwide network, which incorporates an individual membership representative for each country, with the Individual Membership Adviser as a central liaison officer, is being developed for this purpose.

**Conference on the XYY Syndrome**

A two-day Conference on the XYY Syndrome was held in Chevy Chase, Maryland, June 19 and 20, 1969, sponsored by the National Institute of Mental Health's Center for Studies of Crime and Delinquency. A group of experts in genetics, psychiatry, psychology, sociology, and law discussed research, ethical, and social policy issues related to the XYY syndrome. They concluded that a link between the XYY syndrome—an inborn, male chromosome abnormality—and criminal behavior is not clearly demonstrated at the present time.

A major focus of the Conference was on the development of broad and flexible guidelines for research designed to ascertain the true prevalence and frequency of the XYY chromosome constitution in the general population, so that future studies can be more effectively combined and interrelated.

With regard to legal questions that increasingly are being raised, consensus was that no definite conclusions can be drawn about the relationship between the presence of the XYY chromosome and deviant, criminal, and/or violent behavior. The general impression has been conveyed in the popular press that the XYY chromosome is clearly related to criminal behavior. This assertion, according to the 12 specialists, is misleading and has resulted in public concern that is quite premature since available research evidence is not adequate to support it.

A brief publication summarizing the findings, conclusions, and recom-

mendations of the Conference will be available from the Center late in the Fall.

**Tennessee Department of Mental Health**

Dr. Frank Harper Luton has been named commissioner for the Tennessee Department of Mental Health. He succeeded Dr. Nat T. Winston, Jr., who resigned to enter private business.

Dr. Luton had served as assistant commissioner for psychiatric services since September 1968, and as clinical director at Central State Psychiatric Hospital, Nashville, for the previous eight years.

**Academy of Religion and Mental Health**

The Academy of Religion and Mental Health, an international multifaith and multidisciplinary organization bringing the resources of the medical, social, and behavioral sciences together with religion to bear upon problems of human health, behavior, and illness, recently celebrated the fifteenth anniversary of its foundation. At that time the Reverend George C. Anderson, D.D., Founder and President, announced his retirement. The Reverend James R. MacColl, III, D.D. has been elected President.

Members of the Board of Trustees now are: Alvin C. Eurich, Ph.D. (chairman), President of the Academy for Educational Development; Edward A. Ames, Program Officer for Resources and Environment of The Ford Foundation; George P. Berry, M.D., former Dean of the Harvard Medical School, now Special Consultant to the President of Princeton University; Kenneth B. Clark, Ph.D., President of Metropolitan Applied Research Center Inc.; The Rev. John B. Coburn, D.D., former Dean of the Episcopal Theological School, Cambridge, Massachusetts, and Rector Elect, St. James Church, New York City; Joseph T. English, M.D., Administrator of Health Services and Mental Health Administration of the Department of Health, Education, and Welfare; and Charles C. Bergman, Executive Vice President of the Academy.

A main purpose of the Academy is to acquaint clergymen of all faiths with a broader understanding of the principles of mental health and illness which they can use in the course of their pastoral counseling. It creates opportunities for psychiatrists and behavioral scientists to increase their understanding of the positive role the clergy can play in maintaining, restoring, or increasing mental health. In this work, the Academy has become a major agency in establishing meetings and developing collaboration between clergymen, physicians, and social scientists.

**Philbrook Center for Children's Services**

A new children's facility, to be called The Philbrook Center for Children's Services, will be located on the grounds of the New Hampshire Child Guidance Clinic in Concord, adjacent to the New Hampshire Hospital. This new Center, which was authorized by the 1967 session of the New Hampshire General Court, will provide a full spectrum of services for emotionally disturbed children, including outpatient services, inpatient treatment and educational programs, as well as diagnostic and evaluation services.

It was named for Dr. Anna L. Philbrook, pioneer in child psychiatry in

New Hampshire for more than 30 years, and Director of the Child Guidance Clinic from the time of its establishment in 1940 until her retirement in 1966. The establishment of this new facility will see the fulfillment of a life-long dream for Dr. Philbrook who has been New Hampshire's most consistent and successful advocate of adequate services for emotionally disturbed and mentally ill children.

**TV and Psychiatry**

The Department of Psychiatry at the University of Mississippi Medical Center is engaged in an extensive project on use of TV in psychiatry. As part of the project it is issuing an informal *Newsletter and Progress Report* to encourage rapid exchange of information and ideas between those in the mental health fields interested in use of TV. It contains information on technical aspects of use of TV, such as different kinds of videotape and videotape recorders, problems of compatibility, cameras, costs, etc. Development of videotape exchange agreements is another problem under discussion. Abstracts of recent literature are also included. Further information may be obtained from The Director, TV Project, Department of Psychiatry, University of Mississippi Medical Center, Jackson, Miss. 39216.

**Chester F. Carlson Research Laboratory**

The laboratory in the new building of the American Society for Psychical Research has been named in honor of Chester F. Carlson, who died last year. Mr. Carlson, a physicist best known as the inventor of the Xerox process, was much interested in psychical research and served as a Trustee of the Society.

**Schizophrenia Bulletin**

A new publication, the *Schizophrenia Bulletin,* is now being issued by the National Institute of Mental Health. Designed to provide a forum for the exchange of information about the schizophrenic disorders, the *Bulletin* is prepared and edited jointly by the NIMH's Center for Studies of Schizophrenia and National Clearinghouse for Mental Health Information.

The *Bulletin* contains original articles reporting significant research findings and developments in treatment, as well as critical reviews and theoretical discussions. Summaries of research in progress and brief reports of negative results are included. Occasionally there will be a reprint of an important article on schizophrenia published in the past several decades. Other features of the *Bulletin* are news notes on professional and scientific activities concerned with schizophrenia, including announcements of grant awards from the NIMH. Each issue also contains abstracts of the current literature on schizophrenia.

At the outset, the *Bulletin* is being issued on an experimental basis, with plans to publish four issues annually. During this period complimentary subscriptions are available. It is anticipated that later the *Bulletin* will appear as a regular quarterly and be available through paid subscriptions.

For information on complimentary copies, write to:

*Schizophrenia Bulletin*
National Clearinghouse for Mental Health Information
National Institute of Mental Health
5454 Wisconsin Avenue
Chevy Chase, Md. 20015

**Bibliography on Prevention in Mental Health**

"Prevention in Mental Health," a selected annotated bibliography, by Stanley Blostein of West Virginia University was published as a supplement to the May-August issue of *Canada's Mental Health.* Emphasizing publications on "primary prevention," the bibliography is limited primarily to literature of the period 1950–1967, published in the U.S. and Canada. Single complimentary copies (CMH Supplement No. 61) may be obtained in English or French from Carl Birchard, M.S.W., Editor, *Canada's Mental Health,* Department of Health and Welfare, Ottawa, Canada.

**International Convocation**

An International Convocation, sponsored by the American Foundation of Religion and Psychiatry, will be held November 13–15, 1969 in New York City. An interdisciplinary conference concerned with the "health and wholeness of tomorrow's man," it will include discussion of such topics as key issues in the cultural revolution, emerging models of man and the new life styles of tomorrow, therapeutic and theological response to the revolution in sex and aggression, needs of contemporary man and the value of current psychotherapies, a therapeutic response to the social deviant. The Convocation chairman is Hobart Lewis, president and executive editor of *The Reader's Digest.*

Further information and registration forms may be obtained from Mr. Hobart Lewis, Chairman, International Convocation, 3 West 29th St., New York, N. Y. 10001.

**International Association for Child Psychiatry and Allied Professions**

The Seventh Congress of the International Association for Child Psychiatry and Allied Professions will be held in Jerusalem on August 2–7, 1970, under the patronage of His Excellency, the President of the State of Israel, Zalman Shazar. The Congress' theme will be "The Child in His Family." There will be symposia on the Family as a Psychosocial Unit, Mental Disorders in the Family, Physical Illness of the Child or Parents and Its Influence on the Mental Health of the Child, and the Family and Its Environment.

During the three days before the Congress small groups will be able to visit kibbutzim, immigrant's villages, institutions for children, and other places of professional interest. Further information about the Congress may be obtained by writing (air mail) before January 31, 1970 to the Organizing Committee of the International Association for Child Psychiatry and Allied Professions, P. O. Box 6272, Jerusalem, Israel.



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**Research. One of the three Divisions of the National Center is named in honor of the former NIMH staff member—the Seymour D. Vestermark Division of Training.**

**The Vestermark Memorial Lectures will concentrate on the teaching of psychiatry in its broadest context, with special emphasis on the preparation of teachers and use of new educational tools and improved teaching techniques.**

**Dr. Romano, one of the persons who knew Dr. Vestermark best, was selected to give the first lecture in the series by a committee appointed by the President of the APA. Dr. Romano's professional career has included participation in the activities of numerous organizations, councils, and committees related to the training of psychiatrists and other medical professionals. He is also a widely known researcher whose investigations have included physiologic and psychologic studies of delirium, syncope, and various types of psychosomatic illness, and studies of schizophrenic patients.**

**Shortly before his death in 1959, Dr. Vestermark was awarded a Certificate of Achievement by the APA for outstanding service to psychiatry. He was cited for having exerted, during his assignment at NIMH, "a greater influence in the field of psychiatric training than any other one person. For a decade he has stimulated markedly the undergraduate training of medical students in the field of psychiatry and the further development of psychiatric residency training. Recognizing the importance of ancillary disciplines such as psychology, psychiatric social work, and nursing, he has encouraged their development, and has promoted a closer relationship of psychiatry with the law, religion, and the basic sciences."**

**Prior to becoming Chief of the NIMH Training Branch, Dr. Vestermark held posts in U.S. Public Health Service Hospitals in Fort Worth, Texas, and Ellis Island, New York. Earlier, he had participated in pioneer field investigations in Lexington, Kentucky, on the epidemiology of mental illness. He was a member of the U.S. Public Health Service Commissioned Corps from 1931 to 1959, and a Fellow of the American Psychiatric Association.**

**Dr. Romano, also a Fellow of the APA, has held his present posts since 1946. He has been a frequent lecturer, consultant, and visiting professor, and has contributed some 130 articles to scientific journals and books.**

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NATIONAL INSTITUTE OF MENTAL HEALTH
5454 Wisconsin Avenue
Chevy Chase, Maryland 20015

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